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ABSTRACT

This subunit, consisting of an introduction and geography of the USSR, is part of a unit on the USSR, one of four resource units for an eleventh grade course on area studies. The introduction contains suggested teaching procedures for each part of the USSR unit and objectives for the introduction. The section on geography focuses on developing an idea of the potential of the area for industrial and agricultural growth. It begins by having pupils study a physical map and set up hypotheses about other physical features and human activities in the USSR. The hypotheses are checked against other maps and data, hypotheses are developed about other features, which are also checked against various kinds of data. A teacher's guide to the entire course is SO 006 320. A teacher's supplement to the unit on the USSR is SO 006 324; other subunits of the USSR are SO 006 326, SO 006 327, and SO 006 328. (Author/KSM)

ED 083097

Grade: Eleven
Unit 2: The U.S.S.R.
a) Introduction
b) Sub-Unit on Geography

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SO006 325

RESOURCE UNIT

on

THE U.S.S.R.

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1967

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GENERAL SUGGESTIONS FOR TEACHING THE UNIT ON THE U.S.S.R.

To avoid superficial conclusions, students should spend at least ten to twelve studying the U.S.S.R. Such a long unit needs to be broken into sub-units for graders. This area study is divided into an introduction and a series of sub- on the geography of the U.S.S.R., the history of Russia, the Soviet totalitari tem (political system, economic system, social system), and the foreign policy U.S.S.R. Each of these topics is treated as one major section in the outline tent for the area study. However, the teaching procedures are arranged to pro introductory, developmental, and culminating activities for each sub-unit. Te procedures are numbered consecutively within each sub-unit in the order in wh might be used within the classroom.

Part I of this outline of content, with the accompanying teaching procedures, vides an introduction to the entire area study. It should accomplish the fol purposes:

1. It should relate the study of the U.S.S.R. to the overall work of the and to the unit on Western Europe.
2. It should serve to arouse pupil interest in the U.S.S.R.
3. It should provide pupils with an overview of the area study. Preferab this should be done by providing them with an opportunity to help plan study. (See 4 below.)
4. It should give pupils an opportunity to identify goals to be achieved some alternative courses of action to be followed in our relations wit U.S.S.R. It should give pupils an opportunity to figure out how each social sciences might help them come to conclusions about which altern should be followed to achieve their goals. Pupils should have a chanc suggest the kinds of questions which people in each of the social scie would ask about the U.S.S.R. The emphasis in this area study of the U should be upon the Soviet Union as a totalitarian system under communi upon the relations of such a totalitarian system with other parts of t and with the U.S. However, such study obviously requires a study of g and history as well as of the political, economic and social systems.

Part II of the outline of content, with the accompanying teaching procedures, upon geography. However, it should not be thought that this section includes the material in the unit which a geographer would analyze as he studies the S

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hy. However, it should not be thought that this section includes all of
in the unit which a geographer would analyze as he studies the Soviet

Union. Since the geographer is interested in what makes one area of the world
ferent from other areas, he must perforce analyze historical factors which mak
area different and must also study present-day economic, political and social
tures which help differentiate the U.S.S.R. from other parts of the world. In
sense, the whole unit deals with material which the geographer must consider a
studies the Soviet Union. More particularly, the geographer would certainly i
a study of Soviet agriculture and industry. Part II of this resource unit doe
clude material on agricultural production and problems, on resources, and on i
trial production and centers. However, the ways of organizing agriculture and
try are left to the section dealing with the economic system.

Although this section of the unit begins by focusing upon physical geography,
teacher must make sure that pupils analyze ways in which man uses and modifies
cultural environment in terms of his cultural values, perceptions, and level c
nology. After pupils set up hypotheses about the influence of certain physica
tures, they should be forced to test them in the light of other maps, charts a
reading materials. In so doing, they will find that they must modify generali
if these generalizations have been stated too broadly or have implied geograph
determinism. There is a great deal of material in Part II which is designed t
pupils learn about the cultural use and modification of the environment.

Part III of this outline of content deals with the history of Russia. This se
is presented in two different outlines, as follows:

1. The first outline presents generalizations about culture change to be taught
   a study of Russian history and shows how historical data might help pup
   arrive at these generalizations. However, this outline does not provid
   gested order for studying Russian history. Rather, we suggest a more r
   chronological organization (mixed with some topical history in the 19th
   At the end of their study of Russian history, pupils should have the ra
   from which to generalize about both cultural change and cultural cont
2. The second outline is organized in the suggested order for teaching.
   teaching procedures are placed opposite this outline.
3. The historical part of this area study is brought up only to the period
   Stalin was able to take control of the government. This is done so tha
   rate topics such as the political system under totalitarianism can be s

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more systematically and so that pupils can see the changes that have tak
place from Stalin to the present day.

Part IV of the unit provides the main focus for the unit. It is divided into t
parts: the political system, the economic system, and the social system. Thes
topics are all included in Part IV to emphasize both their interrelationships w
each other and the fact that a totalitarian system affects all aspects of life,
including the economic and social systems.

Part V of the area study deals with the U.S.S.R.'s international relations, esp
as they pertain to the United States. This sub-unit should serve as a culminat
section for the entire area study. Having examined the relations up to the pre
the class should do the following:

1. Students should reconsider the alternative courses of action they sugges
   during the introduction to the area study and suggest other alternatives
   First, they should list possible alternatives. Next, they should try t
   possible consequences of each course of action and decide what evidence
   have to support the likelihood that these consequences would follow. Th
   should consider all that they now know about the Soviet Union as they t
   reach conclusions about these alternative courses of action. Next, the
   should compare these possible consequences with their own goals and val
   Finally, they should decide which course or courses of action they woul
   port tentatively and present their reasons for their conclusions. (The
   class does not need to agree. However, students should understand how
   ent pupils arrive at different conclusions and the reasons for these di
   ences. Are the differences in conclusions due to differences in values
   ferences in predictions about possible consequences of different altern
   etc.)
2. Students should consider once again the amount and kind of help they go
   the different social scientists in their attempts to study foreign poli
   lems related to the U.S.S.R.
3. Pupils should also discuss the following question: Are there other ben
   gained from the work done by each kind of social scientist as he studie
   Soviet Union? (For example, can we learn anything about cultural chang
   totalitarianism etc., which has broader implications than just our rela
   with the Soviet Union?) Have pupils prepare a list of generalizations

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et Union? (For example, can we learn anything about cultural change or
litarianism etc., which has broader implications than just our relations
the Soviet Union?) Have pupils prepare a list of generalizations which

they have developed from their study of the U.S.S.R. and which they think might have broader transfer value for studying other problems or areas of the world. Pupils should suggest concrete situations in which these generalizations might have value. Discuss: Can you be sure that these generalizations will hold true in another culture? Why or why not? What is the value of testing such generalizations in other cultures, past and present?

OBJECTIVES FOR INTRODUCTION

The introduction should make progress toward developing the following:

GENERALIZATIONS

1. The world is a community of interdependent countries. (Important political happenings in one part of the world affect other parts.)

2. The international system may be looked at as a series of power relationships.

3. There are many sources of power in dealing with other countries.

   a. Military capacity is an important factor in the development of national power but not the only one or even the dominant one.

   b. Industrial capacity is an important component of national power.

   c. Scientific and technological developments provide an important component of national power.

4. Decision-making in a large, complex society is shared by several groups and is subject to varying influences and limitations.

   a. The institutions of government constitute the arenas or the structure within which authoritative decisions of the political process are made.

      1) It is easier for a to
      tem to make drastic c
      than it is for a demo
      to do so.

   b. The decision-maker react
   from other decision-make
   from the outside.

5. The unity and homogeniety c
totalitarianism demands is
the pluralism of liberal de

6. Technological change may cr
problems in a society.

7. An increase in population c
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SKILLS

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te the arenas or the structure
which authoritative decisions of
olitical process are made.

1) It is easier for a totalitarian system to make drastic changes rapidly than it is for a democratic system to do so.

b. The decision-maker reacts to pressures from other decision-makers as well as from the outside.

5. The unity and homogeniety of life which totalitarianism demands is contrary to the pluralism of liberal democracy.

6. Technological change may create serious problems in a society.

7. An increase in population occurs when the birth rate plus immigration is greater than the death rate plus emigration.

8. All maps contain distortions of one kind or another; each map projection has both advantages and disadvantages, depending upon one's purpose in using a map.

SKILLS

The broad skill toward which teaching is ultimately directed is underlined. A specific aspect of a skill taught in this introduction is in plain type.

1. Attacks problems in a rational manner.
   - a. Sets up hypotheses.
   - b. Considers alternative courses of action.
   - c. Deduces possible consequences from hypotheses (if-then statements) to guide collection of data.
   - d. Considers the relevance of each of the social science disciplines, and uses the types of questions asked and the analytical concepts used in the relevant disciplines to help him analyze the problem.
2. Locates information.
   - a. Uses appropriate reference books to locate information.
3. Gathers information.
   - a. Interprets graphs.
     - 1) Draws inferences from graphs.
     - 2) Looks for misleading graphic devices.
   - b. Draws inferences from tables.
4. Uses effective geographic skills.
   - a. Has a sense of distance and area.
     - 1) Compares distances wit tances.
     - 2) Compares areas with kn
   - b. Interprets maps.
     - 1) identifies distortions

       Compares map grid wit to detect distortions
     - 2) Uses the map or globe distances north and s compare maps of di
     - 3) Uses meridians to ide ences in time zones.
   - c. Selects the appropriate projection (or globe) fo purpose.
5. Evaluates information.
   - a. Evaluates information in curacy.
   - b. Identifies assumptions.
   - c. Distinguishes between di proof.
   - d. Checks on the complete is wary of generalizat insufficient evidence

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1) Compares distances with known distances.

2) Compares areas with known areas.

b. Interprets maps.

1) Identifies distortions on maps.

Compares map grid with globe grid to detect distortions on maps.

2) Uses the map or globe to estimate distances north and south and to compare maps of different scale.

3) Uses meridians to identify differences in time zones.

c. Selects the appropriate type of map projection (or globe) for a specific purpose.

5. Evaluates information.

a. Evaluates information in terms of accuracy.

b. Identifies assumptions.

c. Distinguishes between difficulty of proof.

d. Checks on the completeness of data and is wary of generalizations based on insufficient evidence

ATTITUDES

1. Is curious about social data.

2. Feels a sense of responsibility for keeping informed about current problems.

OBJECTIVES	OUTLINE OF CONTENT
G. The international system may be looked at as a series of power relationships.	I. The Soviet Union is one of the two most powerful countries in the world. What it does affects the life of every American.
G. The world is a community of interdependent countries. (Important political happenings in one part of the world affect other parts.)	
A. IS CURIOUS ABOUT SOCIAL DATA.	

TEACHING PROCEDURES	MATERIALS OF INSTRU
Initiatory Activities	
1. Prepare a bulletin board showing the importance of the U.S.S.R. in world affairs.	
2. Give pupils a pretest to find out what they know about Soviet power and to see if they have some of the common stereotypes about the U.S.S.R. Discuss briefly or at least have pupils tabulate results to find out degree of agreement within the class and the degree to which the class as a whole holds misconceptions.	See "Teacher's Supp to Unit on U.S.S.R. a sample pretest.
3. Read aloud two quotations, one from Frankel on the ideas expressed by a Soviet citizen about the U.S. and another from Bronfenbrenner on the ideas American children have about the Soviet Union. Discuss: Do you think the Soviet citizen's views of the U.S. indicate a good understanding of the U.S.? Why or why not? Do you think the American children's views about the U.S.S.R. represent a good understanding of the Soviet Union? Why or why not? What errors are the American children falling into as they give reasons why the Soviets plant trees along roads? What errors does the Soviet citizen fall into as he lists problems in the U.S.? Discuss the quotations briefly in order to suggest the importance of studying the Soviet Union in some depth.	Max Frankel, "Typic sian Expounds on U. New York Times, Sep 1959, p. 12. Urie Bronfenbrenner The Russians Plant the Road?" Sat. Rev 1933, p. 96. Or se Supplement to Unit

TEACHING PROCEDURES	MATERIALS OF INSTRUCTION
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S. Compares areas with known areas.

S. Uses the map or globe grid to estimate distances north and south and to compare distances on maps of different scales.

S. Compares distances with known distances.

G. All maps contain distortions of one kind or another.

S. Identifies distortions on map.

A. The U.S.S.R. is the largest cou
the world and has the third lar
population in the world.

1. The U.S.S.R. is over 2½ time
area of the U.S. (including
over 2½ times the area of Ch
larger than the entire cont
North America.

es areas with known areas.

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fies distortions on map.

A. The U.S.S.R. is the largest country in the world and has the third largest population in the world.

   1. The U.S.S.R. is over 2½ times the area of the U.S. (including Alaska), over 2½ times the area of China, and larger than the entire continent of North America.

4. Have pupils examine a globe and political-physical maps of the Soviet Union and of North America. Ask: How does the U.S.S.R. compare in size with the U.S.? with China? with North America? (At this point, do not try to have pupils be too accurate in their comparisons.) Then have pupils use the maps to make more accurate comparisons. Use a, b, and c or d (1, 2, 3, 4).	Globe and string. Political-physical maps of U.S.S.R. and North America.
a. Have pupils count the number of degrees of latitude covered by the U.S.S.R. and the U.S. and multiply each degree by 70 miles to figure out the approximate north-south distance for both countries. Have them count the number of degrees of latitude for the U.S. and Canada combined and multiply by 70 miles to compare this distance with the north-south distance in the Soviet Union. Ask: Why use the grid rather than the map scale to compare distances on these two maps?	Political-physical maps of U.S.S.R. and North America.
b. Have pupils count the number of degrees of longitude covered by the U.S. at the 49th parallel. Have them measure this distance off in degrees from the western border of the Soviet Union along the 49th parallel. Now have the pupils measure the number of degrees of longitude covered by the Soviet Union at 60 degrees north latitude (on approximate latitude of Leningrad). At this point, one degree of longitude equals about 34.6 miles. Have pupils figure out the distance across the Soviet Union at this latitude. Compare this distance with the distance across the U.S. Now have pupils	Political-physical maps of U.S.S.R. and North America.

S. Uses meridians to identify differences in time zones.

S. Compares distances with known distances.

measure the number of degrees of longitude between Kaliningrad (old Konisberg) on the Baltic Sea and the Bering Strait at Cape Dezhnev. Compare this figure (about 170 degrees) with the figure for the number of degrees of longitude which would cover half the distance around the earth at this parallel.

c. Have pupils figure out the distances in time between the most eastern and most western parts of the U.S. and between the following places in the Soviet Union: Kaliningrad and Cape Dezhnev; Moscow and Vladivostok.

Physical-political maps of U.S. and of U.S.S.R.

Ask: Suppose you lived in Kaliningrad and got up at 6:30 in the morning. What time would it be then at Cape Dezhnev? Suppose you ate lunch in Kaliningrad at 12:00 noon. What time would it be then in Cape Dezhnev? What time is it in Vladivostok when it is 7:00 in the morning in Moscow? When it is 12:00 noon in Moscow? (Remind pupils that each 15 degrees of longitude makes a difference of 1 hour in sun time.) Compare the number of time zones in the U.S.S.R. and in the U.S.

d. Have pupils use a string to measure and compare the following distances on the globe. (Use the string to measure off distances for bar charts on the chalkboard.)

Globe and piece of string.

1) The greatest north-south distance in the Soviet Union as compared with the greatest north-south distance in the U.S. and the greatest north-south distance in the U.S. and Canada combined.

2) The greatest east-west distance in the Soviet Union as compared to the greatest east-west dis-

S. Compares distances with known distances.

G. All maps contain distortions of one kind or another.

S. Identifies distortions on maps.

S. Selects the appropriate type of map projection (or globe) for a specific purpose.

S. Compares areas with known areas.

tance in the U.S.

3) The distance between Moscow and New York as compared to the distance between Moscow and Vladivostok.

4) The distance between Kaliningrad and Cape Dezhnev as compared to the distance between San Francisco and London. Ask: Why measure distances with a string on the globe rather than on a world map?

5. Do one of the following to help pupils make a more careful comparison of areas.

   a. Have several pupils use the globe to make a rough tracing of the U.S. on a piece of tracing paper. (This will be a rough sketch since the globe is round. However, pupils can cut and paste tucks in the paper to make it fit the surface of the globe better.) Pupils should make as many of these tracings as they find they need to fill in the area of the U.S.S.R. on the globe. They will find that they must cut the last one because it is too large to fit in the remaining space.

   Globe and tracing pa

   b. Or, have pupils make tracings from an equal-area map of the world rather than from the globe. (Ask questions listed under c.)

   Equal-area map of th
   world and tracing pa

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Globe and tracing paper.

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Equal-area map of the
world and tracing paper.

S. Compares areas with known areas.

S. Selects the appropriate type of map projection for a specific purpose.

G. All maps contain distortions of one kind or another; each map projection has both advantages and disadvantages, depending upon one's purpose in using a map.

S. Compares map grid with globe grid to detect distortion on maps.

G. All maps contain distortions of one kind or another; each map projection has both advantages and disadvantages, depending upon one's purpose in using a map.

c. Or show pupils an overlay map showing the U.S.S.R. with map of the U.S. superimposed over the U.S.S.R. and then with a map of North America superimposed over the U.S.S.R. Ask: What kind of map projection do you think I used to make this overlay? Why did I choose this kind rather than a Mercator projection? If pupils cannot answer these questions, use one of a number of devices to help them detect distortion on a Mercator map. For example, you might have them:

Overlay map and ov
projector.

1) Compare grid on globe and on Mercator map to figure out distortions. (Start with this procedure and use others only if necessary.)

2) Or compare areas on globe with some areas on Mercator projection.

3) Or compare different east-west distances across U.S.S.R. on globe and make a bar chart showing these distances for different longitudes. Now do the same for the U.S.S.R. on a Mercator map.

4) Discuss: If a Mercator map distorts area and distance to such a degree, why do you think people ever use this kind of map projection? (This question is designed to review what pupils have learned in earlier grades. However, it may be necessary to have pupils examine shapes and directions on the Mercator map, a globe, and other projections such as an equal-area projection in order to understand the possible uses of a Mercator map.)

w pupils an overlay map showing the U.S.S.R.
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Overlay map and overhead projector.

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a Mercator map.)

S. Uses appropriate reference books to locate information.

S. Compares areas with known areas.

S. Interprets graphs. (Draws inferences from graphs. Looks for misleading graphic devices.)

S. Distinguishes between difficulty of proof.

2. The U.S.S.R. has a population
30 million more than that of
but much lower than that of C
India. If the population con
grow at the rate of recent ye
will reach about 300 million
The large population is a sou
military manpower in case of
of workers for farm and indus
peacetime.

G. An increase in population occurs when the birth rate plus immigration is greater than the death rate plus emigration.

S. Interprets graphs. (Looks for misleading graphic devices.)

ropriate reference books
e information.

areas with known areas.

ts graphs. (Draws infer-
om graphs. Looks for
ng graphic devices.)

ishes between difficulty
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2. The U.S.S.R. has a population of about 30 million more than that of the U.S. but much lower than that of China or India. If the population continues to grow at the rate of recent years, it will reach about 300 million by 1975. The large population is a source of military manpower in case of war and of workers for farm and industry in peacetime.

ase in population occurs
birth rate plus immigra-
greater than the death
s emigration.

ts graphs. (Looks for mis-
graphic devices.)

6. Discuss possible sources or references to use in looking up area and population figures for U.S.S.R. and U.S. Then have a pupil look up the total square miles found within the Soviet Union, the U.S., and China. Have him make a bar graph to compare these areas.

An Almanac.

7. Have another pupil look up the total population of the U.S.S.R., China, India, and the U.S. He should make a bar graph to show these population differences. Show the class a pictograph comparing the present populations of these four countries. Use symbols which differ in size rather than numbers. Compare with pupil's bar graph. Discuss: Which is the better style of graph to use? Why? The pupil might also find out the estimated total world population and make a pie graph to show the proportion of the world population found in each of these countries. Discuss: Why is it difficult to make really accurate comparisons between population figures for different countries?

An Almanac.

8. Ask: Suppose you were a demographer or a scientist interested in population growth and population characteristics. You wish to make an estimate of the probable population of the U.S.S.R. and of the U.S. for 1975. What figures would you look at? Show pupils a bar graph comparing estimates of population totals for these countries in 1975. Ask: Suppose you are a Soviet propagandist and wish to make this probable increase look very great. Which of the following graphs would you use? Suppose you are an American who wishes to make this increase appear small. Which would you use? (Show graphs which exaggerate or minimize growth by using devices such as not using 0 on scale, varying size of vertical or horizontal scale, etc.)

For examples of
graphic devices
How to Lie With

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An Almanac.

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ld you use? (Show graphs which exaggerate
ze growth by using devices such as not using
e, varying size of vertical or horizontal
.)

For examples of misleading graphic devices, see Huff, How to Lie With Statistics.

S. Sets up hypotheses.

S. Deduces possible consequences of hypotheses (if-then statements) to guide collection of data.

G. There are many sources or bases of national power in dealing with other nations. (Military capacity is an important factor in the development of national power but not the only one or even the dominant one.)

S. Distinguishes between difficulty of proof.

S. Checks on the completeness of data and is wary of generalizations based on insufficient evidence.

A. IS CURIOUS ABOUT SOCIAL DATA.

G. The world is a community of interdependent countries.

B. The U.S.S.R. and the U.S. ar
for the foremost position in
strength.

C. The U.S. and the U.S.S.R. ha
locked in a lengthy cold war
at times threatened to becom
With intercontinental missil
hands of both powers, a war
terrible destruction for bot
as well as for the rest of t

hypotheses.

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of national power but not
y one or even the dominant

B. The U.S.S.R. and the U.S. are in a race for the foremost position in military strength.

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on the completeness of
nd is wary of generalizations
n insufficient evidence.

IOUS ABOUT SOCIAL DATA.

ld is a community of inter-
nt countries.

C. The U.S. and the U.S.S.R. have been locked in a lengthy cold war which has at times threatened to become a hot war. With intercontinental missiles in the hands of both powers, a war could end in terrible destruction for both countries as well as for the rest of the world.

9. Discuss: Is a large population more of an asset or liability to a country? (Let pupils set up hypotheses to check on during the rest of this unit and course. Be sure to have them deduce possible consequences from their hypotheses (if-then statements) which might be used to guide their collection of data for testing the hypotheses.

10. Have pupils read recent articles comparing Soviet-American military strength. Or show them graphs and charts making such comparisons. Perhaps, too, show them comparisons between the Soviet strength and the U.S.-Western Europe strength combined. Ask: Which country seems to have the edge on military strength? Discuss: Does the edge which this country has mean that it has nothing to fear from the other in case of war? Have pupils look for newspaper and magazine articles on the military race during the course of this unit.

    If pupils have found differing estimates of Soviet and U.S. military strength, discuss the reasons for these differences. How do Americans arrive at their figures? (Discuss the difficulty of getting accurate figures on the U.S.S.R. and the fact that our figures are estimates.) If pupils have not found differing accounts, you should still discuss the difficulty of obtaining such data on the Soviet Union and of proving the statements made.

Use Reader's Gui
locate most rece
mation. For a
mate of the arme
see Placig, The
the Soviet Chal
41. For a 1965
of nuclear force
Scholastic Book
Editors, The Sov
Union, p. 124.

11. Prepare a bulletin board on "U.S.--U.S.S.R. Showdowns, 1945 to the Present." Read aloud brief excerpts from newspapers or magazines of the time of each crisis to show the danger Americans perceived in each crisis.

See "Teacher's S
to Unit on U.S.S
examples of exce

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mate of the armed forces,
see Platig, The U.S. and
the Soviet Challenge, p.
41. For a 1965 estimate
of nuclear forces, see
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See "Teacher's Supplement
to Unit on U.S.S.R." for
examples of excerpts.

G. The world is a community of interdependent countries.

G. Technological change may create serious problems in a society.

S. Evaluates information in terms of accuracy.

G. The world is a community of interdependent countries.

G. Technological change may create serious problems in a society.

12. Depending upon the background of pupils, you may wish to spend a little time having pupils read about and analyze the possible dangers of an atomic war. If you think pupils already have a fairly good understanding of the dangers, you might have pupils write one of the following imaginary accounts:
    a. An archaeologist's report of excavations in the U.S.--written in the year 2065 A.D.
    b. A newspaper article written for an Argentine newspaper following an atomic war between the U.S. and the U.S.S.R.
    c. The diary of an American who lives through an atomic war by hiding out in a deep underground shelter far from any American city.
    d. A Rip Van Winkle story of an American who was exploring a deep cave at the time an atomic war broke out between the U.S. and the U.S.S.R. He falls asleep while still in the cave, knowing nothing about the war. He wakes up ten years later, leaves the cave, and compares life with what he knew before the war.

    Read aloud several of the best papers or ditto them for pupils to read. Then discuss: Do you think these papers exaggerate the damage which would be inflicted by an atomic war between the U.S. and the U.S.S.R.?

    Now have pupils read some recent estimates of the amount of damage which could be expected in case of such a war as well as several quotations from Americans and Soviet leaders on the possibilities of a clash between the U.S. and the U.S.S.R., the communist-capitalist struggle, and their views about the dangers of atomic destruction.

    See "Teacher's
    Unit on the U.S
    possible quotat

    Discuss: Why do nuclear weapons make the job of the President more difficult than before World War II when dealing with the U.S.S.R.?

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ollowing an atomic war between the U.S. and
S.R.
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See "Teacher's Supplement to Unit on the U.S.S.R." for possible quotations.

hy do nuclear weapons make the job of the
ore difficult than before World War II when
th the U.S.S.R.?

S. Interprets graphs. (Draws inferences from graphs.)

S. Draws inferences from tables.

S. Uses simple statistical devices for analyzing data.

G. There are many sources of national power in dealing with other countries. (Industrial capacity is an important component of national power.)

S. Checks on the completeness of data and is wary of generalizations based on insufficient evidence.

S. Distinguishes between difficulty of proof.

D. The U.S.S.R. is the second most
Industrial power in the world.
been growing at a faster rate t
U.S. during the past two decade
though its growth rate slowed d
time and was surpassed by that
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dealing with other coun-
ndustrial capacity is an
component of national

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insufficient evidence.

shes between difficulty

D. The U.S.S.R. is the second most important industrial power in the world. It has been growing at a faster rate than the U.S. during the past two decades, even though its growth rate slowed down for a time and was surpassed by that in the U.S. in 1962-1963.

13. Show the class graphs comparing the industrial production of the U.S. and of the U.S.S.R. in the 1960's. Ask: Which country was producing more? Now show the class a table presenting the comparative dollar values of the GNP in the U.S., the U.S.S.R., West Germany, the United Kingdom, Japan, France, and Italy in 1964. Ask: How did the U.S.S.R. rank in total economic output?

    Now show pupils a chart comparing rates of economic growth from 1950-1964. (Be sure to review what students learned in the tenth grade course about the meaning of the economic growth rate.) Ask: Which country was growing fastest from 1958 to 1964? How did the U.S. and the U.S.S.R. growth rates compare for 1960? 1961? 1962? 1963? 1964? What conclusions can you draw, if any, about the probable industrial strength of the U.S. and of the U.S.S.R. in the future? Why? (Make sure that students understand that the countries have shifted back and forth somewhat in the lead on growth rates, but that the U.S.S.R. has been ahead during the last two decades taken as a whole.) Also ask: Is it easier to maintain a high growth rate when industrial production has been low or when it has been high? Why?

For a graph of i
production, see
Russia, p. 66.
showing GNP and
rates for the U.
U.S.S.R., and th
countries mentio
"Teacher's Suppl
Unit on U.S.S.R.

14. Have pupils read and discuss a series of quotations from U.S. and Soviet sources on the threat to the U.S. from Soviet industrial growth. Also have them examine the Soviet figures comparing U.S. and Soviet growth. Discuss: Do you think that conditions have changed any since these people made their statements? (Have pupils explain their answers.) Why do you think the Soviets and different American economists come up with different figures on growth rates and industrial production? (Perhaps show pupils the chart in Campbell which compares different estimates on growth rates.)

See "Teacher's
to Unit on U.S.
quotations. Cam
Ec. Power, pp.

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For a graph of industrial production, see Thayer, Russia, p. 66. For charts showing GNP and growth rates for the U.S., the U.S.S.R., and the other countries mentioned, see "Teacher's Supplement to Unit on U.S.S.R."

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See "Teacher's Supplement to Unit on U.S.S.R." for quotations. Campbell, Sov. Ec. Power, pp. 48.

A. IS CURIOUS ABOUT SOCIAL DATA.

G. The institutions of government constitute the arenas or the structure within which the authoritative decisions of the political process are made.

G. It is easier for a totalitarian system to make drastic changes rapidly than it is for a democratic system to do so.

G. Decision-making in a democracy is shared by several groups and is subject to varying influences and limitations.

G. The decision-maker reacts to pressures from other decision-makers and to pressures from outside the government.

G. The unity and homogenity of life which totalitarianism demands is contrary to the pluralism of liberal democracy.

G. There are many sources of national power in dealing with other nations. (Scientific and technological developments provide an important component of national power.)

E. The Soviet Union has made
progress and has achieved
scientific breakthroughs ah
scientists, although U.S.
have been ahead in other de

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rary to the pluralism of
ral democracy.

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r in dealing with other nations.
entific and technological devel-
nts provide an important com-
nt of national power.)

E. The Soviet Union has made rapid scientific progress and has achieved some important scientific breakthroughs ahead of U.S. scientists, although U.S. scientists have been ahead in other developments.

Also discuss: Do you think the MIT professor is justified in his gloom? Why or why not? Do we have enough information to be sure of our conclusions? Why or why not?

15. In a class of capable students, you might have pupils read an excerpt from Adlai Stevenson's _Friends and Enemies_ on the peril the U.S. faces if it does not decide to make the necessary sacrifices to meet the Soviet competition. Discuss: Do you think that the position of the U.S. is better or worse than Stevenson predicted in 1959? Do you agree with Stevenson's analysis of American weaknesses? Why or why not?

Adlai Stevenson, _Fr_
and Enemies, pp. x

16. Ask: Can you think of any recent scientific "first" or advance in the Soviet Union. Of what importance is this development to the U.S.?

uss: Do you think the MIT professor is justi-
is gloom? Why or why not? Do we have enough
on to be sure of our conclusions? Why or why

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in 1959? Do you agree with Stevenson's
of American weaknesses? Why or why not?

Adlai Stevenson, Friends and Enemies, pp. xii-xxii.

you think of any recent scientific "first"
e in the Soviet Union. Of what importance
evelopment to the U.S.?

S. Considers alternative courses of action.

A. IS CURIOUS ABOUT SOCIAL DATA.

A. FEELS A SENSE OF RESPONSIBILITY FOR KEEPING INFORMED ABOUT CURRENT PROBLEMS.

S. Identifies assumptions.

S. Considers alternative courses of action.

S. Considers the relevance of each of the social science disciplines, and uses the types of questions asked and the analytical concepts used in the relevant disciplines to help him analyze the problem.

A. FEELS A SENSE OF RESPONSIBILITY FOR KEEPING INFORMED ABOUT CURRENT PROBLEMS.

A. IS CURIOUS ABOUT SOCIAL DATA.

F. The U.S.S.R. was the first co
country in the world and is s
the two leading communist pow
struggle with Red China over
influence may prove either a
or an advantage to the U.S. i
affairs.

G. A sound foreign policy toward
Union can be built only on kn
the many aspects of Soviet li

H. Study of the U.S.S.R. can hel
social science hypotheses and
knowledge in these fields. S
can help us at home as well a
dealings with other countries

ers alternative courses of
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IOUS ABOUT SOCIAL DATA.

A SENSE OF RESPONSIBILITY
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n the relevant disciplines
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A SENSE OF RESPONSIBILITY
EPING INFORMED ABOUT CURRENT
MS.

IOUS ABOUT SOCIAL DATA.

F. The U.S.S.R. was the first communist country in the world and is still one of the two leading communist powers. Its struggle with Red China over communist influence may prove either a disadvantage or an advantage to the U.S. in world affairs.

G. A sound foreign policy toward the Soviet Union can be built only on knowledge about the many aspects of Soviet life.

H. Study of the U.S.S.R. can help us test social science hypotheses and advance our knowledge in these fields. Such knowledge can help us at home as well as in our dealings with other countries.

17. Prepare a bulletin board display on conflict between the U.S.S.R. and Red China. Or read aloud headlines pointing out this conflict. Or have each pupil read a current article dealing with the conflict. Then discuss: How may the outcome of this conflict affect the U.S.? If you were President, how would you deal with the Soviet Union in the light of this conflict? Do you have enough information about either the Soviet Union or China to answer this question at the present time? Why or why not?

Use current articles Check Reader's Guide Periodical Literatur articles published d past year.

18. Read aloud quotes from people advocating different policies toward the Soviet Union. What goals do these people hold as they suggest these policies? What assumptions are they making? Have pupils try to define their own goals for our relations with the U.S.S.R. Have them suggest other policy alternatives than those already quoted. Ask: Suppose you were President or the Secretary of State. What kinds of information would you want before trying to make up your mind about what foreign policies we should adopt in our dealings with the Soviet Union? What kinds of help can we get from the different social scientists in helping to answer such questions? What kinds of questions would each kind of social scientist ask about the Soviet Union? Does it matter whether or not American citizens are informed about the Soviet Union so long as the President, the State Department, and Congressmen are informed? Why? What advantages can you see to studying the U.S.S.R. other than getting help in determining our policies toward the Soviet Union?

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s would each kind of social scientist ask
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long as the President, the State Department,
gressmen are informed? Why? What advantages
see to studying the U.S.S.R. other than getting
determining our policies toward the Soviet

Use current articles. Check Reader's Guide to Periodical Literature for articles published during past year.

19. Display books on the Soviet Union (on a table or on the chalkboard rack). Or prepare a bulletin board display of book jackets of new books on the Soviet Union.

20. Give pupils an overview for the entire area-study, pointing out the way in which it will be broken into sub-units and the ways in which the questions they have raised will be studied.

OBJECTIVES FOR SUB-UNIT ON GEOGRAPHY

The sub-unit on geography should make progress toward developing the followin

GENERALIZATIONS

1. Man uses his physical environment in terms of his cultural values, perceptions, and level of technology.
   a. Whether or not a country's size provides more advantages or disadvantages depends upon the problems its inhabitants face at a particular time, upon their goals, and upon their level of technology.
   b. The significance of location depends upon cultural developments both within and outside a country.
   c. The topography of a region may present limitations given a specific level of technology; however, man has learned to overcome many of the earlier limitations.
   d. Obstacles to communication may be social as well as physical.
   e. Climate may set up limitations upon man's activities given a specific level of technology, but man has learned to overcome many of the earlier limitations.
   f. Types of agriculture in a
   pend upon man's cultural
   ceptions, and technology
   upon climate, soils, and
   g. Population distribution
   values and his technology
   physical features of an
2. Temperature is affected by
from the equator, elevation,
from warm water bodies, pre
air pressure systems, ocean
and physical features which
from certain directions.
   a. Places in the interior o
   tend to have greater ext
   perature than places alo
      1) The ocean and other l
      of water do not heat
      as land.
      2) Winds which blow over
      of water (or land are
      warm air to nearby la
3. The rotation of the earth p
and night, while the inclin
earth and its revolution ar

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*These objectives have also been taught in the introduction to the overall
the U.S.S.R.

OBJECTIVES FOR SUB-UNIT ON GEOGRAPHY

-unit on geography should make progress toward developing the following:

ZATIONS

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 of his cultural values, percep-
, and level of technology.

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des more advantages or disadvantages
epends upon the problems [illegible] inhabit-
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eir goals, and upon their level of
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e significance of location depends
on cultural developments both with-
 and outside a country.

e topography of a region may pre-
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s learned to overcome many of the
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stacles to communication may be so-
al as well as physical.

imate may set up limitations upon
n's activities given a specific
vel of technology, but man has
arned to overcome many of the
rlier limitations.

f. Types of agriculture in a region depend upon man's cultural values, perceptions, and technology as well as upon climate, soils, and topography.

g. Population distribution reflects man's values and his technology as well as physical features of an area.

2. Temperature is affected by the distance from the equator, elevation, distance from warm water bodies, prevailing winds, air pressure systems, ocean currents, and physical features which block winds from certain directions.

   a. Places in the interior of continents tend to have greater extremes of temperature than places along the coast.

      1) The ocean and other large bodies of water do not heat up so rapidly as land.

      2) Winds which blow over warm bodies of water (or land areas) carry warm air to nearby land areas.

3. The rotation of the earth produces day and night, while the inclination of the earth and its revolution around the sun

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objectives have also been taught in the introduction to the overall unit on
.S.R.

result in seasons and differences in temperature on the earth's surface.

4. Rainfall is affected by distance from bodies of warm water, wind direction, temperature, and physical features which block winds carrying moisture.

5. Differing crops need differing amounts of rainfall and differing temperatures and number of frost-free days in order to grow; they need water and dryness at different times during their period of growth.

   a. Vegetation is affected by temperature. (Grass will grow in some areas which are too cold for trees to grow.)

   b. The land in hot regions dries fast as the warm air picks up moisture; therefore, more rain is needed to grow crops in these regions than in regions which are not so hot.

6. Soil in a particular place is affected by the type of basic rock in the region; the climate; vegetation; erosion; wind, glaciers and rivers which move soil, and by how man treats the soil.

7. Nature changes the face of the earth through biotic processes.

8. Some things can be produced better in one place than in another because of climate, resources, transportation routes,
access to resources, access to
people's skills, etc.

9. Unevenly distributed phenomena
tinctive patterns on the map.

   a. Population is distributed un
   over the earth's surface; ma
   land areas are unevenly popu

10. A region is an area of one or m
geneous features. The core are
ly homogeneous, but there are t
al zones where boundaries are d
tween different regions.

11. Regions are delimited on many
bases, depending upon the purpo
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basis of functional relatio

*12. An increase in population occu
birth rate plus immigration is
than the death rate plus emigra

13. Changes in the birth and death
in the ratio between sexes can
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14. The degree of horizontal mobili
a society (including shifts of
from rural to urban areas) can
portant effects upon a society.

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otic processes.

s can be produced better in
than in another because of
esources, transportation routes,

access to resources, access to markets, people's skills, etc.

9. Unevenly distributed phenomena form distinctive patterns on the map.

   a. Population is distributed unevenly over the earth's surface; many of the land areas are unevenly populated.

10. A region is an area of one or more homogeneous features. The core area is highly homogeneous, but there are transitional zones where boundaries are drawn between different regions.

11. Regions are delimited on many different bases, depending upon the purpose of the study; some are delimited on the basis of a single phenomenon, some on the basis of multiple phenomena, and some on the basis of functional relationships.

*12. An increase in population occurs when the birth rate plus immigration is greater than the death rate plus emigration.

13. Changes in the birth and death rates and in the ratio between sexes can have important effects upon a society.

14. The degree of horizontal mobility within a society (including shifts of population from rural to urban areas) can have important effects upon a society.

15. People who are in contact with each other are likely to borrow cultural traits from each other. Migration of people from one part of the world to another involves the movement of culture and material objects, thus resulting in changes in the area to which people migrate.

*16. The world is a community of interdependent countries.

17. Nations may pool their power behind common goals in varying systems of alliance and combinations.

18. Foreign policy decisions are affected by ... considerations of national self-interest....

SKILLS

The broad skill toward which teaching is ultimately directed is underlined. A specific aspect of a skill is in plain type.

1. Attacks problems in a rational manner.
    - *a. Sets up hypotheses.
    - b. Sets up ways of testing hypotheses.
2. Locates information.
    - *a. Chooses appropriate reference book to locate information.
3. Gathers information.
    - *a. Interprets graphs and tabl
(Draws inferences from gra
tables.)
4. Uses effective geographic ski
    - a. Has a sense of distance and
        - *1) Compares distances with
tances.
        - *2) Compares area with know
    - b. Interprets maps.
        - 1) Interprets map symbols
lines, color layers, do
ing).
        - 2) Draws inferences from m
plying previously-lea
and generalizations.
        - 3) Draws inferences from a
of different map patter
same area.
    - c. Visualizes a generalized m
U.S.S.R.
    - d. Differentiates between sma
large-scale maps and knows
each.

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likely to borrow cultural
m each other. Migration of
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aterial objects, thus result-
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hypotheses.

ways of testing hypotheses.

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appropriate reference book to
information.

3. Gathers Information.
    *a. Interprets graphs and tables. (Draws inferences from graphs and tables.)
4. Uses effective geographic skills.
    a. Has a sense of distance and area.
        *1) Compares distances with known distances.
        *2) Compares area with known areas.
    b. Interprets maps.
        1) Interprets map symbols (isometric lines, color layers, dots, hatching).
        2) Draws inferences from maps by applying previously-learned concepts and generalizations.
        3) Draws inferences from a comparison of different map patterns of the same area.
    c. Visualizes a generalized map of the U.S.S.R.
    d. Differentiates between small-scale and large-scale maps and knows when to use each.

   e. Is in the habit of looking at places or events in terms of relative location.

5. Evaluates information.

   *a. Checks on the completeness of data.

6. Organizes and analyzes data and draws conclusions.

   *a. Tests hypotheses against data.

ATTITUDES

1. Is curious about social data.

2. Is sceptical of the finality of knowledge; considers generalizations and theories as tentative, always subject to change in the light of new evidence.

3. Respects evidence even when it contradicts preconceptions.

4. Believes that the social sciences can contribute to men's welfare by providing information and explanatory generalizations which help them achieve their goals.

SUB-UNIT ON GEOGRAPHY OF THE U.S.S.R.

A. IS CURIOUS ABOUT SOCIAL DATA.

II. Man uses his physical environment of his cultural values, perceptio level of technology.

S. Draws inferences from maps by applying previously-learned concepts and generalizations.

A. The great size of the Soviet U had advantages and disadvantag are being changed somewhat by logical developments.

SUB-UNIT ON GEOGRAPHY OF THE U.S.S.R.

US ABOUT SOCIAL DATA.

ferences from maps by
previously-learned con-
d generalizations.

II. Man uses his physical environment in terms of his cultural values, perceptions, and level of technology.

A. The great size of the Soviet Union has had advantages and disadvantages; these are being changed somewhat by technological developments.

1. Give the class a pupil's guide to this sub-unit. Discuss possible individual and small group activities, and ask for pupil suggestions for other kinds of activities. Have pupils list their choices for activities in order of preference and turn their lists in at the end of the hour. Assign activities the next day, and give pupils a tentative schedule to show the days on which they are to be prepared with their activities. (This is a long unit, so each pupil should do several individual or small group activities.)

2. Have pupils try to figure out the importance of many of the physical features of the U.S.S.R. by studying different map patterns of that country. Have them set up a series of hypotheses as they study each map. They should check these hypotheses later against other maps, other kinds of data in tabular [illegible], and [illegible] material. Because checking on the first hypotheses on the implications of size of the country would [illegible] pupils to look at other maps before they can [illegible] other hypotheses to check with these maps, it is [illegible] to have pupils set up as many hypotheses as possible from each map before moving on to the next one. You will have to tell pupils that they will check these hypotheses at a later date.

   You should not try to teach the generalizations listed in column one as pupils set up hypotheses, nor should you teach the content listed in the outline of content. They are presented opposite the activities calling for hypotheses-making only so that the teacher will know the purpose of the activities in terms of unit generalizations and content and so that he will know better what questions to ask to stimulate hypotheses. Since the

S. Draws inferences from maps by applying previously-learned concepts and generalizations.

S. Sets up hypotheses.

G. Man uses his physical environment in terms of his cultural values, perceptions, and level of technology.

G. Whether or not a country's size provides more advantages or disadvantages depends upon the problems inhabitants face at a particular time, upon their goals, and upon their level of technology.

1. Great size makes it more li country will have a varied resources for different kin cultural crops and industry

2. Great size may make it easi country to support a large although size itself is not tant as is the size of the men can use productively an in which men use the land t living.

3. The great size of Russia an Soviet Union has permitted Retreat" in past wars; inva have been defeated by permi to advance so far into Russ transportation lines became effective military action g existing levels of technolo

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of his cultural values,
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or not a country's size
more advantages or disad-
depends upon the problems
nts face at a particular
on their goals, and upon
vel of technology.

1. Great size makes it more likely that a country will have a varied climate and resources for different kinds of agricultural crops and industry.

2. Great size may make it easier for a country to support a large population, although size itself is not so important as is the size of the area which men can use productively and the ways in which men use the land to earn a living.

3. The great size of Russia and now the Soviet Union has permitted "Defense by Retreat" in past wars; invading armies have been defeated by permitting them to advance so far into Russia that their transportation lines became too long for effective military action given the existing levels of technology. This

content is listed at this point in the outline, it is not repeated later during activities designed to test the earlier hypotheses. However, the generalizations are listed again.

During the hypotheses-making stage of this sub-unit, you may wish to ask each student to develop his own list of hypotheses and then have a committee use them to develop a composite list. Or you may wish to develop a class list through a general class discussion, with a class secretary keeping a list of the suggested hypotheses as you write them on the chalkboard. Be sure to include and even attempt to stimulate contradictory hypotheses at this stage of the unit.

Begin with a political-physical map showing the Soviet Union in relation to its bordering countries. Ask: In what ways do you think that the great size of the Soviet Union has been of importance? Let pupils think of all of the possible ways they can and list them on the chalkboard as untested hypotheses. If necessary, stimulate pupil thinking by asking more detailed questions such as: Do you think that the great size could affect agriculture in any way? How? Do you think it could affect the kinds of resources which the Soviet Union might have? How? Do you think that it could have affected the development of transportation facilities? How? Do you think that its great size will have proved useful or a handicap in its wars with western and Far Eastern countries? Have pupils examine the long coast line of the Soviet Union. What do they think this long coastline might mean in terms of sea transport?

Political-phys
of U.S.S.R. sh
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on it.

Be sure to have pupils answer such questions, indicating why and stating possible hypotheses. They should not be permitted to answer just "yes" or "no." Do not try to

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er hypotheses. However, the generalizations
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terms of sea transport?

Political-physical map of U.S.S.R. showing countries which border on it.

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d to answer just "yes" or "no." Do not try to

S. Sets up ways of testing hypotheses.

G. The significance of location depends upon cultural developments both within and outside of a country.

S. Sets up hypotheses.

S. Sets up ways of testing hypotheses.

S. Is in the habit of looking at places or events in terms of relative location.

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4. The great size of the Soviet U
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5. The great size and distances a
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warm oceans. This in turn mea
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B. The significance of the Soviet Un
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influenced the course of Russian

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advantage would be lost in a war fought entirely with missiles.

4. The great size of the Soviet Union has combined with topography and climate to make it difficult to develop needed transportation and communication facilities in the past; these difficulties are being reduced by technological developments and the use of more capital to develop transportation routes now that improved transportation has come to hold a higher value for the people of the Soviet Union.

5. The great size and distances across the U.S.S.R. (east-west and north-south) have meant that parts of the Soviet Union are bound to be far from warm oceans. This in turn means that part of the country will have a continental climate of cold winters and hot summers.

B. The significance of the Soviet Union's location has depended upon cultural developments; however, the location has also influenced the course of Russian history.

   1. Russia's location between Western Europe, the Middle East, and the Far East turned it into a crossroads for people from all three areas; Russia adopted aspects of the culture of all three areas, so that Soviet culture differs from the culture in each of the other areas.

have pupils test their hypotheses at the present time. Rather, encourage pupils to list hypotheses. Include conflicting hypotheses if pupils suggest them. Tell the students that they will test these hypotheses at a later point. However, at this time ask: How do you think we can test these hypotheses? What kinds of data do we need to test each of those we have listed?

3. Have pupils examine a physical-political map of the U.S.S.R. in relation to all of its neighbors. They should note the location of the two cultures which they have studied earlier (Western Europe in grade eleven and the Middle East in grade eight or nine). Then have pupils note the relative location of the U.S.S.R. in connection with cultures of the Far East. Ask: What significance do you think this central location between these three great culture areas may have had for Russia? Do not discuss hypotheses in detail at this time. Tell pupils they will do so at a later point in the unit. However, ask: How do you think we can check your guesses (or hypotheses)?

Physical-politica
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test their hypotheses at the present time. ourage pupils to list hypotheses. Include hypotheses if pupils suggest them. Tell that they will test these hypotheses at a . However, at this time ask: How do you test these hypotheses? What kinds of data to test each of those we have listed?

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Physical-political map of the U.S.S.R. showing countries which border upon it.

S. Sets up hypotheses.

G. The significance of location depends upon cultural developments both within and outside a country.

S. Sets up hypotheses.

S. Sets up hypotheses.

G. Foreign policy decisions are affected by . . . considerations of national self-interest. . . .

2. Russia's location on the
the European plain has ma
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expansion in the past.

3. Russia's location in rela
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2. Russia's location on the eastern end of the European plain has made it an important military objective for European expansion in the past.

3. Russia's location in relationship to other countries has meant that it has had no ports except in the Arctic that give access to open seas without having to go close to or through narrow passages dominated by other countries. The desire for ports on open seas was a contributing factor in the Russo-Japanese War and in Russia's struggles with Turkey.

Have pupils note the number of different countries which border on the U.S.S.R. Ask: What significance do you think this has for Soviet foreign affairs? (Have pupils set up hypotheses.)

4. Have pupils note the broad expanse of the plain which extends across Europe into the Soviet Union. Discuss: Do you think this lack of physical barrier in the days before airplanes may have had any influence upon the course of Russian history? Have pupils set up hypotheses to test. Do not try to test them at this time.

Physical-political
U.S.S.R. showing co
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5. Have pupils note the countries which control the outlets to some of the seas on which the Soviet Union has ports. What significance does this have for Soviet foreign policy? Have pupils set up hypotheses to test later.

Physical-political
U.S.S.R. showing re
Europe and also Mi
East.

6. Show pupils a map of the areas acquired by the U.S.S.R. after World War II. Discuss: Why do you think the U.S.S.R. wanted these areas? Have pupils set up hypotheses to check against historians' conclusions as they study a later part of the unit.

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Physical-political map of
U.S.S.R. showing countries
which border upon it.

note the countries which control the outlets
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cance does this have for Soviet foreign
e pupils set up hypotheses to test later.

Physical-political map of
U.S.S.R. showing rest of
Europe and also Middle
East.

a map of the areas acquired by the U.S.S.R.
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ted these areas? Have pupils set up hypoth-
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r part of the unit.

S. Compares distances with known distances.

G. Man uses his physical environment in terms of his cultural values, perceptions, and level of technology.

G. The world is a community of interdependent countries.

G. Nations may pool their power behind common goals in varying systems of alliances and combinations.

4. The U.S.S.R.'s location in
to the Arctic Circle and Al
made it a close neighbor of
Our defense system against
planes has been built to gu
attack from the north. The
of the U.S.S.R.'s location
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s and combinations.

4. The U.S.S.R.'s location in relationship to the Arctic Circle and Alaska has made it a close neighbor of the U.S. Our defense system against missiles and planes has been built to guard against attack from the north. The significance of the U.S.S.R.'s location in relationship to the Arctic has changed as a result of the development of planes and missiles.

7. Ask: Outside of Canada and Mexico, which country is our closest neighbor? Have several pupils examine the globe again. They should use a string to measure the distance between the northernmost edge of the Soviet Union and the northern edge of the U.S. (not counting Alaska). Have them use a string to measure the distance between the U.S. and other countries than Canada and Mexico. They might make a bar graph to compare these distances. (e.g. U.S.-U.S.S.R.; U.S.-Britain; U.S.-France; U.S.-China; U.S.-Cuba; etc.) Now have pupils measure the distance between the U.S.S.R. and Alaska and compare this distance with that between Florida and Cuba.

Globe and stri

Several other pupils might work together to measure the distances between their home town and different capitals of the world, including Moscow. They should also make a bar graph to illustrate their findings.

Have the class examine the bar graphs. The pupils who made them should explain how they made them and why they used the globe rather than a map to do so.

Discuss: What does the closeness between the U.S.S.R. and the U.S. mean today? Do you think it meant the same thing before we had airplanes? before we had intercontinental missiles?

8. Have an able student give an illustrated oral report on our defense system against missiles and planes. Where are the defense systems placed? Discuss: In the modern age of missiles, could the U.S. set up a defense system against missiles without cooperating with other countries?

ide of Canada and Mexico, which country is our ighbor? Have several pupils examine the globe ey should use a string to measure the distance e northernmost edge of the Soviet Union and rn edge of the U.S. (not counting Alaska). use a string to measure the distance between nd other countries than Canada and Mexico. make a bar graph to compare these distances. -U.S.S.R.; U.S.-Britain; U.S.-France; U.S.- .-Cuba; etc.) Now have pupils measure the etween the U.S.S.R. and Alaska and compare nce with that between Florida and Cuba.

Globe and string.

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S. Is in the habit of looking at places and events in terms of relative location.

S. Draws inferences from maps by applying previously-learned concepts and generalizations.

G. Temperature is affected by the distance from the equator, distance from warm water bodies, prevailing winds, air pressure systems, ocean currents, and physical features which block winds from certain directions.

S. Sets up ways of testing hypotheses.

5. The Soviet Union's location
northern latitudes has comb
other factors to give the c
days in summer and short da
a relatively cold climate w
area of perma-frost, only o
which is ice-free all year
which are frozen much of th
large areas with less than
tive days free from frost f
crops.

   a. About 4/5 of the country
   of the northern boundary

   b. The U.S.S.R. has a large
   permafrost in which the
   never thaws below the to
   this permafrost makes it
   to grow certain kinds of
   makes for poor drainage.

   c. A large part of the Sovi
   too few frost-free days
   many agricultural produc
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ways of testing hypotheses.

5. The Soviet Union's location in the northern latitudes has combined with other factors to give the country long days in summer and short days in winter, a relatively cold climate with a large area of perma-frost, only one harbor which is ice-free all year long, rivers which are frozen much of the year, and large areas with less than 100 consecutive days free from frost for growing crops.

   a. About 4/5 of the country lies north of the northern boundary of the U.S.

   b. The U.S.S.R. has a large area of permafrost in which the ground never thaws below the top few feet; this permafrost makes it difficult to grow certain kinds of crops and makes for poor drainage.

   c. A large part of the Soviet Union has too few frost-free days for growing many agricultural products except at great expense. However, the Soviets have developed an elaborate system of greenhouses to grow vegetables for

9. Have pupils look at a world map to note the relative location of the U.S.S.R. and the U.S. in terms of latitude. In less capable classes, perhaps have a pupil make a cut-out of the U.S. from the world map and move it into its appropriate position in terms of latitude over the southern part of the U.S.S.R. and the region south of the U.S.S.R. Have another pupil do the same thing with a cut-out map of North America. Place these cut-outs on clear plastic so that pupils can see through them. In other classes, use overlays to show the same thing. Or project a single-page overlay showing these two countries superimposed in this way. Use one of several sources.

   Now have pupils compare the locations of a number of cities or lakes in the Soviet Union and in the U.S. and Canada (e.g. Odessa on the Black Sea with Duluth; Kiev with Winnepeg; Leningrad with Skagway, Alaska; Moscow with Ketchikan, Alaska; Vladivostok with Halifax; Alma Ata in Middle Asia with Salt Lake City; Caspian Sea with the Great Lakes). At first do not tell pupils what cities to find which are relatively parallel with the Soviet cities. Have them think of their own possibilities.

10. Ask: What effect do you think this northerly location would have upon the Soviet Union? (If necessary ask more detailed questions to get pupils to set up hypotheses about possible effects upon temperature in general and more specifically upon ports, rivers, vegetation, agriculture or length of growing season between frosts, ease of invading Soviet Union, etc. Also ask: What effects would this northern location have upon the length of the day in summer? in winter?) Do not test pupils' hypotheses at this time. However, ask: What kinds of data should we examine to test our hypotheses?

World map.
For example of
and U.S.S.R. s
in terms of ap
latitudes, see
World's Nation
Scholastic Boo
Editors, The S
p. 6.

s look at a world map to note the relative
f the U.S.S.R. and the U.S. in terms of lati-
less capable classes, perhaps have a pupil
-out of the U.S. from the world map and move
s appropriate position in terms of latitude
outhern part of the U.S.S.R. and the region
he U.S.S.R. Have another pupil do the same
a cut-out map of North America. Place these
n clear plastic so that pupils can see
em. In other classes, use overlays to show
hing. Or project a single-page overlay showing
countries superimposed in this way. Use one of
urces.

upils compare the locations of a number of
lakes in the Soviet Union and in the U.S. and
g. Odessa on the Black Sea with Duluth; Kiev
peg; Leningrad with Skagway, Alaska; Moscow
ikan, Alaska; Vladivostok with Halifax; Alma
dle Asia with Salt Lake City; Caspian Sea with
Lakes). At first do not tell pupils what
find which are relatively parallel with the
ies. Have them think of their own possibilities.

effect do you think this northerly location
upon the Soviet Union? (If necessary ask
led questions to get pupils to set up hypothe-
possible effects upon temperature in general
pecifically upon ports, rivers, vegetation,
e or length of growing season between frosts,
vading Soviet Union, etc. Also ask: What
uld this northern location have upon the length
in summer? in winter?) Do not test pupils'
at this time. However, ask: What kinds of
d we examine to test our hypotheses?

World map.
For example of maps of U.S.
and U.S.S.R. superimposed
in terms of appropriate
latitudes, see Deasy et.al.
World's Nations, p. 563 or
Scholastic Book Service
Editors, The Soviet Union,
p. 6.

G. Vegetation is affected by temperature. (Grass will grow in some areas which are too cold for trees to grow.)

G. Differing crops need differing. . . temperatures and number of frost-free days in order to grow. . . .

S. Tests hypotheses against data.

G. The rotation of the earth produces day and night, while the inclination of the earth and its revolution around the sun result in seasons and differences in temperature on the earth's surface.

S. Tests hypotheses against data.

G. Temperature is affected by. . . ocean currents. . . .

G. Foreign policy decisions are affected by. . .considerations of national self-interest. . . .

some of the towns they have
in northern Siberia.

d. At times the cold winters hav
Russians against invading arm

e. Soviet rivers are frozen ove
much of the year, thus makin
rivers less useful for river

f. The U.S.S.R.'s northern loca
it very long days in the summ
help overcome the shortness
period which is frost-free.

g. The Soviet Union has only on
which is ice-free all year r
cause of the warm currents w
sweep up and around Scandinav
However, this port is in an
which ships meet frequent an
storms. It is also distant
major centers of population.
lack of warm water ports has
important factor in a number
wars. Russia has tried to a
land to give it ports which
open more months during the

:ion is affected by tempera-
(Grass will grow in some
which are too cold for trees
v.)

ing crops need differing. . .
atures and number of frost-
ays in order to grow. . . .

hypotheses against data.

tation of the earth produces
night, while the inclination
earth and its revolution
the sun result in seasons
fferences in temperature on
rth's surface.

hypotheses against data.

ature is affected by. . .
currents. . . .

n policy decisions are
ed by. . .considerations of
al self-interest. . . .

some of the towns they have established in northern Siberia.

d. At times the cold winters have helped Russians against invading armies.

e. Soviet rivers are frozen over for much of the year, thus making the rivers less useful for river transport.

f. The U.S.S.R.'s northern location gives it very long days in the summer which help overcome the shortness of the period which is frost-free.

g. The Soviet Union has only one port which is ice-free all year round because of the warm currents which sweep up and around Scandinavia. However, this port is in an area in which ships meet frequent and heavy storms. It is also distant from the major centers of population. This lack of warm water ports has been an important factor in a number of Russian wars. Russia has tried to acquire land to give it ports which would be open more months during the year.

11. Show pupils charts of the length of day at different latitudes in summer and winter. Have them check their hypotheses about the length of days at different times of year in the Soviet Union.

Charts may be found
Miller, et. al., Gl
Geography, pp. 31,

12. Have a committee prepare a bulletin board display on "Seaports in the U.S.S.R." The display should include a large map showing the major ports. There should be a card listing the advantages and disadvantages of each port. Each card should be connected to the appropriate place on the map by colored string.

charts of the length of day at different n summer and winter. Have them check their about the length of days at different times the Soviet Union.

Charts may be found in Miller, et. al., Global Geography, pp. 31, 33.

ittee prepare a bulletin board display on n the U.S.S.R." The display should include showing the major ports. There should be a g the advantages and disadvantages of each card should be connected to the appropriate e map by colored string.

G. Man uses his physical environment in terms of his cultural values, perceptions, and level of technology.

S. Draws inferences from maps by applying previously-learned concepts and generalizations.

S. Sets up hypotheses.

S. Sets up ways of testing hypotheses.

G. Temperature is affected by the. . . distance from warm water bodies, prevailing winds, air pressure systems, ocean currents, and physical features which block winds from certain directions.

G. Places in the interior of continents tend to have greater extremes of temperature than places along the coast.

G. The ocean and other large bodies of water do not heat up as rapidly as land nor cool so rapidly as land.

h. The Soviet Union has devel
Northern Sea Route whose ac
tion must use ice-breakers
planes to help ships move f
northern port to another du
months of the year. The la
a route made it necessary f
to send its navy around the
Africa during its war with
1905.

6. The U.S.S.R.'s location in rel
to the Atlantic Ocean has help
it a continental climate and r
amount of rainfall. The Arcti
cold to provide a moderating i
in the winter time.

his physical environment
of his cultural values,
ons, and level of tech-

erences from maps by
previously-learned con-
generalizations.

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ays of testing hypotheses.

ure is affected by the. . .
from warm water bodies,
g winds, air pressure
ocean currents, and physi-
ures which block winds from
irections.

the interior of continents
ave greater extremes of
ure than places along the

and other large bodies
do not heat up as rapidly
or cool so rapidly as land.

h. The Soviet Union has developed the Northern Sea Route whose administration must use ice-breakers and spotter planes to help ships move from one northern port to another during many months of the year. The lack of such a route made it necessary for Russia to send its navy around the tip of Africa during its war with Japan in 1905.

6. The U.S.S.R.'s location in relationship to the Atlantic Ocean has helped give it a continental climate and reduce the amount of rainfall. The Arctic is too cold to provide a moderating influence in the winter time.

13. After the class has studied the bulletin board display, ask: Suppose you were the Soviet leaders and wished to use the northern ports more months in the year. What steps might you take? Let pupils discuss the possibilities briefly. Then read aloud brief excerpts from Cressy to describe what the Soviets have done and the importance of the Northern Sea Route to the U.S.S.R.

Cressey, Soviet
(Use last paragra
173 and first par
p. 175.)

14. Have pupils look at the location of the U.S.S.R. in relationship to the Atlantic Ocean. Ask: In what direction do the prevailing winds blow in this latitude? (Pupils should know from study of Western Europe.) What do you think the location means in terms of the kind of climate which the Soviet Union would have (temperature and rainfall)? Again have pupils set up hypotheses to test but do not try to test them at this time. Ask: How do you think you can check these hypotheses?

Physical-politica
U.S.S.R. and Euro

lass has studied the bulletin board display, se you were the Soviet leaders and wished to thern ports more months in the year. What you take? Let pupils discuss the possibili- y. Then read aloud brief excerpts from escribe what the Soviets have done and the of the Northern Sea Route to the U.S.S.R.

Cressey, Soviet Potentials (Use last paragraph on p. 173 and first paragraph on p. 175.)

look at the location of the U.S.S.R. in rela- the Atlantic Ocean. Ask: In what direction alling winds blow in this latitude? (Pupils from study of Western Europe.) What do you ocation means in terms of the kind of climate oviet Union would have (temperature and rain- in have pupils set up hypotheses to test but to test them at this time. Ask: How do you an check these hypotheses?

Physical-political map of U.S.S.R. and Europe.

G. Winds which blow over warm bodies of water (or land areas) carry warm air to nearby land areas.

G. Rainfall is affected by distance from bodies of warm water, wind direction, etc.

S. Draws inferences from maps by applying previously-learned concepts and generalizations.

S. Sets up hypotheses.

S. Sets up ways of testing hypotheses.

G. Temperature is affected by the distance from the equator, . . distance from warm water bodies, . .and physical features which block winds from certain directions.

G. Temperature is affected by. . .prevailing winds, air pressure systems, ocean currents, and physical features which block winds from certain directions.

G. Rainfall is affected by distance from bodies of warm water, wind direction, etc.

7. The U.S.S.R.'s location in rel
to the Arctic Ocean, combined
lack of mountains to the north
helped to make the northern pa
country much colder.

8. The U.S.S.R.'s location in rela
to prevailing winds and high ar
pressure systems has helped gi
country a cold, dry climate.

a. The western part of the cou
rain from the Atlantic, but
storms are deflected to the
the winter time by the high
system over Siberia. This
sure system also deflects s
from the Mediterranean and
them from bringing much rai

hich blow over warm bodies
r (or land areas) carry
r to nearby land areas.

l is affected by distance
dies of warm water, wind
on, etc.

nferences from maps by
g previously-learned
s and generalizations.

hypotheses.

ways of testing hypotheses.

ture is affected by the dis-
rom the equator, . . distance
rm water bodies, . . and
l features which block winds
rtain directions.

ture is affected by. . .pre-
winds, air pressure systems,
urrents, and physical features
lock winds from certain
ons.

l is affected by distance
dies of warm water, wind
on, etc.

7. The U.S.S.R.'s location in relationship to the Arctic Ocean, combined with the lack of mountains to the north have helped to make the northern part of the country much colder.

8. The U.S.S.R.'s location in relationship to prevailing winds and high and low pressure systems has helped give the country a cold, dry climate.

   a. The western part of the country gets rain from the Atlantic, but the storms are deflected to the north in the winter time by the high pressure system over Siberia. This high pressure system also deflects storms from the Mediterranean and keeps them from bringing much rain to

15. Have pupils look at the location of the U.S.S.R. in relationship to the North Pole and the Arctic Ocean. Have them also note the landforms (or lack of mountains) in the northern part of European Russia and western and central Siberia. Ask: What effect do you think this location and lack of mountains may mean in terms of weather in the northern part of the Soviet Union? Why? Again have pupils set up hypotheses to test later. Ask: How do you think you can test these hypotheses?

Map of U.S.S.R. or

16. Place a large sheet of plastic over the physical map or project a physical map transparency with an overhead projector. Use a china marking pencil to draw in the high and low pressure systems and wind directions in January. Note the relationship between the high pressure system in Central Siberia and the winds during this time. Ask: How do you think the U.S.S.R.'s location in terms of this high pressure center and the prevailing winds affects rainfall and temperature during the winter time? Now show a plastic overlay with the low pressure system and prevailing winds in the summer time. Ask: How do you think the location of the U.S.S.R. in relationship to this kind of weather pattern in the

See Lydolph, Geogra
the U.S.S.R., pp.
for maps showing da
needed for the acti

ook at the location of the U.S.S.R. in
to the North Pole and the Arctic Ocean.
o note the landforms (or lack of mountains)
rn part of European Russia and western and
ia. Ask: What effect do you think this
lack of mountains may mean in terms of
e northern part of the Soviet Union? Why?
pils set up hypotheses to test later.
you think you can test these hypotheses?

Map of U.S.S.R. or globe.

sheet of plastic over the physical map or
sical map transparency with an overhead
Jse a china marking pencil to draw in the
pressure systems and wind directions in
e the relationship between the high pres-
n Central Siberia and the winds during
Ask: How do you think the U.S.S.R.'s loca-
of this high pressure center and the pre-
affects rainfall and temperature during
me? Now show a plastic overlay with the
system and prevailing winds in the summer
How do you think the location of the U.S.S.R.
ip to this kind of weather pattern in the

See Lydolph, Geography of the U.S.S.R., pp. 13-14 for maps showing data needed for the activity.

S. Draws inferences from maps by applying previously-learned concepts and generalizations to new data.

S. Sets up hypotheses.

S. Sets up ways of testing hypotheses.

S. Interprets map symbols (color layers).

G. Man uses his physical environment in terms of his cultural values, perceptions, and level of technology.

G. The topography of a region may present limitations given a specific level of technology.

S. Sets up hypotheses.

S. Differentiates between small-scale and large-scale maps and knows when to use each.

eastern parts of the count
the winter time.

b. Prevailing winds keep the
ing the Pacific Ocean from
much warmth from the Pacif
during the winter time as
winds were from the opposi
tion.

B. The Soviet Union's topography ha
tant for a number of reasons; H
has learned to overcome some of
tions placed upon him by this to
earlier in history.

1. The lack of physical barriers
west and the great plains ma
quent invasions of Russia fr
and west and the drive to ex
borders. Even the Urals wer
crossed long before modern t
portation were developed.

ferences from maps by
previously-learned
and generalizations to

hypotheses.

ways of testing hypotheses.

ts map symbols (color

his physical environment
of his cultural values,
ons, and level of tech-

graphy of a region may
limitations given a spe-
vel of technology.

hypotheses.

tiates between small-scale
e-scale maps and knows
use each.

eastern parts of the country during the winter time.

b. Prevailing winds keep the areas bordering the Pacific Ocean from getting as much warmth from the Pacific Ocean during the winter time as though the winds were from the opposite direction.

B. The Soviet Union's topography has been important for a number of reasons; however, man has learned to overcome some of the limitations placed upon him by this topography earlier in history.

1. The lack of physical barriers on the west and the great plains made easy frequent invasions of Russia from both east and west and the drive to expand Russia's borders. Even the Urals were easily crossed long before modern types of transportation were developed.

summer time affects rainfall and temperature? Do not discuss at this point. Just set up hypotheses and possible reasons. (Be sure to have pupils look at Far Eastern part of country as well as western part of Soviet Union as they try to figure out hypotheses.) Ask: How do you think you can check these hypotheses?

17. Prepare a bulletin board display showing a physical map of the Soviet Union with photographs illustrating many of the places shown on the map. The photographs should be connected to the appropriate places on the map with colored string.

Physical map of
and photos of pl
U.S.S.R.

18. Now have pupils look at a physical map of the U.S.S.R. in more detail. Also project a large scale map of the Urals. (You may wish to show pupils comparative sketches of profiles of the Urals and the Appalachians looking at them from the west or from the east. Also have pupils measure the east-west width of the Urals as compared with the Appalachians at several different points.) Ask: What are the advantages or disadvantages of large-scale and small-scale maps? Ask: Do you think the Urals provided any barrier to invasion from either the east or west prior to the invention of the airplane? Why or why not? Do you think they provided any barrier to eastward expansion by the Russians prior to the development of the airplane? Why or why not? (Have pupils set up hypotheses to test in the next activity.)

Physical map of
See Lydolph, Geo
the U.S.S.R., p.
map of Urals.
Physical map of
or of the easter
the U.S.

N

affects rainfall and temperature? Do not this point. Just set up hypotheses and possi-. (Be sure to have pupils look at Far Eastern intry as well as western part of Soviet Union to figure out hypotheses.) Ask: How do you an check these hypotheses?

oulletin board display showing a physical map iet Union with photographs illustrating many ces shown on the map. The photographs should d to the appropriate places on the map with ing.

Physical map of U.S.S.R. and photos of places in U.S.S.R.

upils look at a physical map of the U.S.S.R. tail. Also project a large scale map of the ou may wish to show pupils comparative sketches s of the Urals and the Appalachians looking om the west or from the east. Also have pupils e east-west width of the Urals as compared ppalachians at several different points.) are the advantages or disadvantages of large- small-scale maps? Ask: Do you think the ided any barrier to invasion from either the st prior to the invention of the airplane? not? Do you think they provided any barrier d expansion by the Russians prior to the devel- the airplane? Why or why not? (Have pupils otheses to test in the next activity.)

Physical map of U.S.S.R. See Lydolph, Geography of the U.S.S.R., p. 134 for map of Urals.
Physical map of the U.S. or of the eastern part of the U.S.

S. Tests hypotheses against data.

S. Interprets maps by applying previously learned generalizations.

S. Sets up hypotheses.

G. Rainfall is affected by distance from bodies of warm water, wind direction, temperature and physical features which block winds carrying moisture.

2. The high mountains to th
fect climate by cutting
air from the Pacific and
(Only a small area in th
much moisture from the P
soon season.)

3. High mountains also prov
from the cold northern w
casian area and the sout
mean peninsula; however,
mountains in the greater
U.S.S.R. means that ther
cold Arctic winds except

hypotheses against data.

prets maps by applying previ- learned generalizations.

up hypotheses.

all is affected by distance bodies of warm water, wind tion, temperature and physi- eatures which block winds ing moisture.

2. The high mountains to the south and east affect climate by cutting off rainfall and warm air from the Pacific and from the Indian Ocea (Only a small area in the Far East receives much moisture from the Pacific during the mon soon season.)
3. High mountains also provide some protection from the cold northern winds in the Transcaucasian area and the southern side of the Crimean peninsula; however, the lack of high mountains in the greater part of northern U.S.S.R. means that there is no barrier to cold Arctic winds except the high pressure

19. Have a pupil give a report on the physical problems facing Napoleon during the Napoleonic invasion of Russia. Have another pupil give a similar report on the physical problems facing the Germans during their invasion of World War II. Be sure to have pupils compare the area invaded by the Germans with the area east of the Mississippi in the U.S. Discuss: Do you think your hypothesis was correct? (Or, which of your hypotheses do you think is borne out by the evidence thus far?) Do you think that the principle of defense by retreat would hold true if the Soviet Union were to go to war with a country in the Far East? How far would Japan have to invade the U.S.S.R. to reach the first important industrial complex? Suppose a war were to break out between the Soviet Union and China. Would this principle of defense by retreat be of help?

    Now have a pupil report on the military difficulties which faced the Russian government during the Russo-Japanese War in 1905. Discuss: Do you think that the great size of Russia had anything to do with the defeat? What other aspects of Russian physical features seem to have been involved? What cultural factors seem to have been involved?

See world histo
Scholastic Book
Editors, The So
pp. 32-33, 129-
Lengyel, The So
pp. 1-2.

See also "Selec
on Russian Hist

20. Have pupils look at the high mountainous areas in southern and eastern U.S.S.R. Ask: What effect do you think these mountains would have upon rainfall in different parts of the Soviet Union? Why? What effect do you think they would have upon temperatures in the Soviet Union? Why? What do you think the effect is of a lack of high mountains in the northern part of the U.S.S.R.? (Let pupils set up hypotheses about temperatures and rainfall to check later.) You may wish to prepare a cut-out bulletin board to remind pupils of the effects

Physical map of

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r pupil give a similar report on the physical
cing the Germans during their invasion of
II. Be sure to have pupils compare the area
the Germans with the area east of the Missis-
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me out by the evidence thus far?) Do you
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if the Soviet Union were to go to war with a
the Far East? How far would Japan have to
U.S.S.R. to reach the first important indus-
lex? Suppose a war were to break out between
Union and China. Would this principle of
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he Soviet Union? Why? What effect do you
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See world history textbooks.
Scholastic Book Services
Editors, The Soviet Union,
pp. 32-33, 129-130.
Lengyel, The Soviet Union,
pp. 1-2.

See also "Selected Readings
on Russian History."

Physical map of U.S.S.R.

system during the winter time.

S. Tests hypotheses against data.

S. Interprets map symbols (isolines).

G. Unevenly distributed phenomena form distinctive patterns on the map.

S. Applies previously-learned concepts and generalizations to new data.

G. Temperature is affected by the distance from the equator, elevation, distances from warm water bodies, prevailing winds, air pressure systems, ocean currents, and physical features which block winds from certain directions.

of high mountain barriers upon rainfall. An illustration is shown in an article by James R. Smith, "Bulletin Boards in Geography," *The Journal of Geography*, 58: 301-303 (September, 1959).

21. Now have pupils check their many hypotheses about temperature and rainfall against three kinds of sources. First, have them examine climatic maps of the Soviet Union showing temperatures and rainfall in January and in July and maps showing the number of frost-free months in different parts of the Soviet Union. (Review the use of isometric lines on maps.) Second, have pupils examine climatic data charts for selected cities in the Soviet Union.

For maps see:
Geography of
pp. 16-17; Cre
Potential, 48-
Regional Atlas
Deasy, et. al,
Nations, pp.
For climatic c
tables, see: C
Potential, p.
chart on map c
the Oxford *Reg*
of the U.S.S.R
Wheeler, et. a
of the World,

22. Perhaps have a pupil translate temperature data into a series of graphs comparing Soviet cities with U.S. or Canadian cities at the same latitude. (Compare the temperatures of western Soviet cities with temperatures of west coast cities in the Americas. Compare east coast cities in both America and the Soviet Union. Compare southern, interior cities in the U.S.S.R. with interior cities in the U.S.) Or compare Moscow and Leningrad temperatures with temperatures in Minneapolis which is further south. Have the class examine these graphs. Then ask: How do you account for these differences of temperature for cities at the same latitude?

ountain barriers upon rainfall. An illustra-
hown in an article by James R. Smith, "Bulletin
Geography," The Journal of Geography, 58: 301-
ember, 1959).

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rainfall against three kinds of sources. First,
examine climatic maps of the Soviet Union
emperatures and rainfall in January and in July
showing the number of frost-free months in
parts of the Soviet Union. (Review the use
tric lines on maps.) Second, have pupils exam-
tic data charts for selected cities in the So-
on.

For maps see: Lydolph, Geography of the U.S.S.R., pp. 16-17; Cressy, Soviet Potential, 48-49; Oxford Regional Atlas of the U.S.S.R., Deasy, et. al, World's Nations, pp. 572-74; For climatic charts and tables, see: Cressy, Soviet Potential, p. 216; insert chart on map on p. 30 of the Oxford Regional Atlas of the U.S.S.R. See also Wheeler, et. al., Reg. Geog. of the World, p. 238.

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of graphs comparing Soviet cities with U.S. or
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of western Soviet cities with temperatures of
t cities in the Americas. Compare east coast
both America and the Soviet Union. Compare
interior cities in the U.S.S.R. with interior
the U.S.) Or compare Moscow and Leningrad tem-
with temperatures in Minneapolis which is furth-
Have the class examine these graphs. Then ask:
u account for these differences of temperature
s at the same latitude?

S. Compares areas with known areas.

G. Climate may set up limitations upon man's activities given a specific level of technology, but man has learned to overcome many of the earlier limitations.

S. Draws inferences from maps by applying previously-learned concepts and generalizations.

S. Sets up hypotheses.

G. The topography of a region may present limitations given a specific level of technology; however, man has learned to overcome many of the earlier limitations.

4. The lack of much relief on
northern plains has combin
permafrost to give the U.S
tions of poorly-drained an

5. A large part of Russia (ab
is too mountainous or hill
crop land under present te
ditions.

areas with known areas.

ay set up limitations up-
activities given a specif-
of technology, but man has
o overcome many of the ear-
tations.

erences from maps by ap-
eviously-learned concepts
alizations.

ypotheses.

raphy of a region may
imitations given a spec-
l of technology; however,
earned to overcome many
rlier limitations.

4. The lack of much relief on many of the northern plains has combined with the permafrost to give the U.S.S.R. large sections of poorly-drained and swampy lands.

5. A large part of Russia (about one-eighth) is too mountainous or hilly to make good crop land under present technological conditions.

23. Compare the area of permafrost in the U.S.S.R. with the area of the U.S. Perhaps show the class a map which indicates areas where there are also islands of permafrost outside of the main area.

Read aloud Cressey's description of the permafrost. Or have a pupil present an illustrated report on the effects of permafrost in Siberia. He should compare the changes reported from the 1960 article to the 1967 article.

For map, see M
of the U.S.S.R
Deasy, et. al.
tions, p. 603.
Cressey, Sovie
p. 46., paragr
Sochurek, "Rus
Lands," Life,
Conger, "Siber
Frozen Frontie
Geographic, Mc
297-345.

24. Once again show pupils the temperature maps of the U.S.S.R. and have them examine these in relationship to the physical map. Ask: What effects do you think the physical relief of these northern plains areas combined with the temperature in these areas would have upon drainage? Would you expect to have well-drained land or swampy land? Why? (Have pupils set up hypotheses to test later.)

Physical map o
Maps of Jan. a
perature in th

25. Once again show the class a physical map of the U.S.S.R. Ask: Are there any parts of the Soviet Union where you think it would be difficult to grow crops because of physical relief? Where? How much of the country is too mountainous or hilly to make good crop land under present technological conditions? What could be done to increase the amount of hilly land used for crops?

Physical-polit
U.S.S.R.

e area of permafrost in the U.S.S.R. with the e U.S. Perhaps show the class a map which in- eas where there are also islands of permafrost the main area.	For map, see Mellor, Geog. of the U.S.S.R., p. 53 or Deasy, et. al., World's Nations, p. 603.
Cressey's description of the permafrost. Or ll present an illustrated report on the effects ost in Siberia. He should compare the changes rom the 1960 article to the 1967 article.	Cressey, Soviet Potentials, p. 46., paragraph 2. Sochurek, "Russia's Remote Lands," Life, June 13, 1960. Conger, "Siberia: Russia's Frozen Frontier," National Geographic, Mch., 1967, pp. 297-345.
show pupils the temperature maps of the U.S.S.R. hem examine these in relationship to the physi- Ask: What effects do you think the physical these northern plains areas combined with the e in these areas would have upon drainage? expect to have well-drained land or swampy ? (Have pupils set up hypotheses to test lat-	Physical map of the U.S.S.R. Maps of Jan. and July temperature in the U.S.S.R.
show the class a physical map of the U.S.S.R. there any parts of the Soviet Union where you ould be difficult to grow crops because of elief? Where? How much of the country is inous or hilly to make good crop land under chnological conditions? What could be done to he amount of hilly land used for crops?	Physical-political map of the U.S.S.R.

6. The lack of much relief on th
plains has made it less expen
railroads and roads over much
however, poor drainage and pe
made it difficult to build tr
routes in some areas or to ke
good repair. Air traffic can
some of these handicaps, alth
too expensive as yet to move
goods.

7. The high mountains have made
to build good roads and railr
parts of Russia; as a result,
have been relatively isolated
are making transportation to
areas easier, and technologic
ments have made it easier to
roads and roads in these area

S. Tests hypotheses against data.

S. Interprets tables (draws inferences from tables.)

S. Sets up hypotheses.

G. The topography of a region may present limitations given a specific level of technology; however, man

6. The lack of much relief on the extensive plains has made it less expensive to build railroads and roads over much of the area; however, poor drainage and permafrost have made it difficult to build transportation routes in some areas or to keep them in good repair. Air traffic can overcome some of these handicaps, although it is too expensive as yet to move very bulky goods.

7. The high mountains have made it difficult to build good roads and railroads through parts of Russia; as a result, some parts have been relatively isolated. Airlines are making transportation to some of these areas easier, and technological developments have made it easier to build railroads and roads in these areas.

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potheses against data.

ts tables (draws inferences
les.)

ypotheses.

graphy of a region may pre-
itations given a specific
technology; however, man

26. Have pupils look at the plains areas on a physical map of the U.S.S.R. Ask: What effect do you think these extensive plains would have upon attempts to build roads and railroads? What effect would the temperature pattern have upon such attempts? What effects would the temperature pattern have upon roads and railroads which have been built? (If necessary remind pupils of what they learned in activity 23 about the effects of permafrost and summer thawing upon buildings and streets in Yakutsk.)

Physical-politic
U.S.S.R.

27. Show pupils a physical map and large-scale maps of some of mountainous areas. Also show pictures of these areas. Ask: How easy do you think it would have been for people in Russia to build railroads and roads through these mountains prior to recent roadbuilding machinery? How easy would it be today? What effect do you think the problems of building roads would have upon the people living in these mountainous areas? Do you think this situation may be changing today? Why or why not?

Physical map of
Lydolph, Geog. o
pp. 153, 235 (ma
Thayer, Russia,
85 (pictures).
Cressey, Soviet
pp. 19, 64, 140,
151, 153 (pictur
Stavrianos, Glob
p. 304.
Filmstrip: U.S.S
graphic Backgrou
frames, 6-9. Fil
Res. of Sov. Un.
frames 10, 17-18

28. Have pupils examine a map showing railroads and highways in the Soviet Union. Have them compare these maps with similar maps for the U.S. Also show tables comparing miles of railroads and roads in the U.S. and in the U.S.S.R. How do they account for the differences? (Be sure that pupils understand that the difference is not all due to differences in difficulties in building roads.) Ask: From your study of these maps, where would you expect to find the greatest population densities? The fewest people? (Have pupils set up hypotheses to check later.)

For maps of rai
roads, see atlas
viet Union or C
Potentials, pp.
et. al., World's
p. 586; Mellor,
U.S.S.R., p. 33
Lydolph, Geog. o
pp. 394, 398, (r
(table).

ls look at the plains areas on a physical map of
.R. Ask: What effect do you think these exten-
ns would have upon attempts to build roads and
? What effect would the temperature pattern
such attempts? What effects would the tempera-
ern have upon roads and railroads which have
t? (If necessary remind pupils of what they
n activity 23 about the effects of permafrost
r thawing upon buildings and streets in Yakutsk.)

Physical-political map of U.S.S.R.

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or to recent roadbuilding machinery? How easy
be today? What effect do you think the problems
ng roads would have upon the people living in
ntainous areas? Do you think this situation may
ng today? Why or why not?

Physical map of the U.S.S.R. Lydolph, Geog. of the U.S.S.R. pp. 153, 235 (maps). Thayer, Russia, pp. 22-23, 85 (pictures). Cressey, Soviet Potentials, pp. 19, 64, 140, 142, 146, 151, 153 (pictures). Stavrianos, Global History, p. 304. Filmstrip: U.S.S.R.: The Geographic Background, Eyegate, frames, 6-9. Filmstrip: Nat. Res. of Sov. Un., S.V.E.; frames 10, 17-18.

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of railroads and roads in the U.S. and in the
How do they account for the differences? (Be
pupils understand that the difference is not
o differences in difficulties in building roads.)
n your study of these maps, where would you ex-
ind the greatest population densities? The few-
e? (Have pupils set up hypotheses to check

For maps of railroads and roads, see atlases on the Soviet Union or Cressey, Sov. Potentials, pp. 10-11; Deasy, et. al., World's Nations, p. 586; Mellor, Geog. of the U.S.S.R., p. 338; Lydolph, Geog. of the U.S.S.R., pp. 394, 398, (maps), p. 396 (table).

has learned to overcome many of the earlier limitations.

S. Draws inferences from maps by applying previously-learned concepts and generalizations.

8. The direction in which the r
been important, particularly
new engineering techniques a

ned to overcome many of the
limitations.

ferences from maps by ap-
reviously-learned concepts
ralizations.

8. The direction in which the rivers flow has been important, particularly in the past; new engineering techniques are overcoming

Now have a group of pupils or the entire class check geography texts and other materials to find out how accurate their predictions have been about roads and railroads.

Ginsburg, Atlas
velopment, pp. 6
77 (maps and tab
Whiting, Sov. Un
230-233 (maps of
For written disc
railroads and hi
Cressey, Soviet
pp. 7-8.
Whiting, Soviet
pp. 229,234-236.
Lengyel, Sov. Un
Scholastic Book
itors, Sov. Uni
93.
Lydolph, Geog. o
pp. 389-39.
Mellor, Geog. of
p. 309, 322-325,
Kohn and Drummon
Today, pp. 391-3

29. Project a map of airlines in the U.S.S.R. Ask pupils to compare it with the railroad and highway maps. To what extent do airlines supplement these other types of transport in the same regions? To what extent do they provide transportation facilities to areas outside of those served by railroads and highways?

Project a table showing the increase in air traffic from 1955 to 1965. Discuss its implications.

Transp. & Comm.
S.V.E., frames 3
Whiting, Sov. Un
pp. 238-239 (map
(table).

30. Now have pupils look at a map showing the rivers in western U.S.S.R. Ask: In what direction do the different rivers flow? Why? Into what bodies of water do these

Physical map of

group of pupils or the entire class check
texts and other materials to find out how ac-
ir predictions have been about roads and rail-

Ginsburg, Atlas of Ec. Development, pp. 62-63, 66-77 (maps and tables).
Whiting, Sov. Union Today, 230-233 (maps of highways).
For written discussion of railroads and highways, see:
Cressey, Soviet Potentials, pp. 7-8.
Whiting, Soviet Union Today, pp. 229,234-236.
Lengyel, Sov. Union, 65-66.
Scholastic Book Services Editors, Sov. Union, pp. 92-93.
Lydolph, Geog. of the U.S.S.R., pp. 389-39.
Mellor, Geog. of the U.S.S.R., p. 309, 322-325, 347-352.
Kohn and Drummond, The World Today, pp. 391-392. Filmstrip: Transp. & Comm. in Sov. Un., S.V.E., frames 33-40.

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with the railroad and highway maps. To what
airlines supplement these other types of trans-
e same regions? To what extent do they provide
tion facilities to areas outside of those served
ds and highways?

Whiting, Sov. Union Today, pp. 238-239 (map), p. 241 (table).

table showing the increase in air traffic from
65. Discuss its implications.

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R. Ask: In what direction do the different
w? Why? Into what bodies of water do these

Physical map of U.S.S.R.

S. Sets up hypotheses.

G. The topography of a region may present limitations given a specific level of technology; however, man has learned to overcome many of the earlier limitations.

S. Draws inferences from maps by applying previously-learned concepts and generalizations.

some of the problems of th

a. The Volga flows into th
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portation but not so us
flowed into a body of w
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the Volga River to the
flows into the Caspian
River which flows into
Moscow, which lies some
any sea, is now connect
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Consequently the rivers
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c. The rivers of the Sovie
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have not provided as goo
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However, a number of tr
rivers do provide some
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limitations.

nferences from maps by ap-
reviously-learned concepts
eralizations.

some of the problems of the past.

a. The Volga flows into the landlocked Caspian Sea. It has been useful for transportation but not so useful as though it flowed into a body of water with access to open seas. Recent canals have tied the Volga River to the Don River which flows into the Caspian Sea and to the River which flows into the Baltic Sea. Moscow, which lies some distance from any sea, is now connected by a series of canals and rivers to five seas.

b. The course of the eastern rivers takes them from moderately densly populated areas o areas with sparse population rather than between several areas of dense population. Consequently the rivers are less useful for transportation than they might otherwise be.

c. The rivers of the Soviet Union flow mainly north or south rather than east and west. This has meant that the rivers have not provided as good transportation east and west as many would have desired. However, a number of tributaries of these rivers do provide some east-west routes. Earlier in Russian history, men portaged between these tributaries. Today, the Soviet Union has built many canals connecting the tributaries.

d. Most of the eastern rivers flow northward into the Arctic. This makes them less useful for transportation because the rivers flow? How useful do you think these rivers would be for transportation? Why? From what you know so far about the Soviet Union, how dense would you expect the population to be near the mouths of the eastern rivers? Why? If you are right in your guess, how would this affect the usefulness of these rivers? How useful are the rivers for transportation east and west across the Soviet Union? How do you think early Russians used them as they moved in an east-west direction? How do you think the Soviets might increase their value for east-west transportation today? (Have pupils set up hypotheses to check later.)

31. Remind pupils of the temperature maps once more. Ask: What effect do you think temperatures would have upon the usefulness of Soviet rivers for transportation? Project a table showing the length of the shipping season

Physical map
Temperature m
Lydolph, Geo.
p. 388 (table

low? How useful do you think these rivers would ransportation? Why? From what you know so far e Soviet Union, how dense would you expect the ion to be near the mouths of the eastern rivers? you are right in your guess, how would this afe usefulness of these rivers? How useful are the or transportation east and west across the Soviet How do you think early Russians used them as they an east-west direction? How do you think the might increase their value for east-west transon today? (Have pupils set up hypotheses to check

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Physical map of U.S.S.R.
Temperature map of U.S.S.R.
Lydolph, Geo. of the U.S.S.R., p. 388 (table).

S. Sets up hypotheses.

S. Tests hypotheses against data.

G. The topography of a region may present limitations given a specific level of technology; however, man has learned to overcome many of the earlier limitations.

river mouths are frozen c
the year. Furthermore, t
melts to the south and sc
parts of the river first;
that the water is more li
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aphy of a region may pre-
ations given a specific
echnology; however, man
d to overcome many of
r limitations.

river mouths are frozen over much of the year. Furthermore, the river ice melts to the south and so on the upper parts of the river first; this means that the water is more likely to overflow the river banks where rivers are still frozen. There is great flooding in the plains area in the spring; combined with permafrost, this flooding has resulted in many swampy areas.

theses against data.

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echnology; however, man
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r limitations.

on major rivers in the U.S.S.R.

Also ask: Where does the ice in the Mississippi thaw first? What effect does this thawing have upon the river below? Why was there such a serious flood in Minnesota on the Mississippi and Minnesota rivers in the spring of 1965? (The ground froze very deep before heavy snows came, so that the water from melted snow could not sink into the ground.) Now consider the Soviet rivers which flow northward. What parts of these rivers would thaw first when spring comes? Would you expect these rivers to flood more or less than the Mississippi? Why? Would you expect the 1965 situation of run-off in Minnesota due to the freezing of the ground to be similar to the Russian situation or would you expect the floods to sink rapidly into the Russian soil along the rivers? Why? Would you expect the floods to recede more rapidly in Minnesota or in the Soviet Union? Why? What do you think the effects of this flooding would have upon the land for agricultural purposes? Now describe the floods which take place on Soviet rivers.

3[illegible]. Have pupils check their hypotheses about the usefulness of rivers for transportation by reading various geography texts. Be sure to have some pupils read Lydolph and Cressey on the building of canals and Taaffe on the reasons why rivers are not used to full capacity for handling freight when railroads are so over-worked.

After pupils have finished reading, discuss: Were your hypotheses correct or do you need to modify them? (Analyze reasons.) How have the Soviets made their river system more useful for transportation? Why isn't more freight traffic shifted to the rivers now that so many canals have been built and since railroads are so busy?

Lengyel, Sov.
8.
Wheeler, Reg.
World, pp. 23
Mellor, Geog.
pp. 339-340.
Lydolph, Geog
pp. 36-37, 64
127-129, 191-
389.
Cressey, Sovi
pp. 84-85, 87
100, 129.
Taaffe, "Volg
portation: Pr

ivers in the U.S.S.R.

Where does the ice in the Mississippi thaw at effect does this thawing have upon the w? Why was there such a serious flood in Min- the Mississippi and Minnesota rivers in the 1965? (The ground froze very deep before heavy me, so that the water from melted snow could nto the ground.) Now consider the Soviet riv- flow northward. What parts of these rivers first when spring comes? Would you expect rs to flood more or less than the Mississippi? d you expect the 1965 situation of run-off in due to the freezing of the ground to be simi- Russian situation or would you expect the sink rapidly into the Russian soil along the hy? Would you expect the floods to recede ly in Minnesota or in the Soviet Union? Why? u think the effects of this flooding would the land for agricultural purposes? Now de- floods which take place on Soviet rivers.

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Lengyel, Sov. Union, pp. 7-8.
Wheeler, Reg. Geog. of the World, pp. 239-242.
Mellor, Geog. of the U.S.S.R., pp. 339-340.
Lydolph, Geog. of the U.S.S.R., pp. 36-37, 64, 66-69, 122, 127-129, 191-196, 214, 388-389.
Cressey, Soviet Potentials, pp. 84-85, 87-88, 94-96, 99-100, 129.
Taaffe, "Volga River Transportation: Problems and Pros-

S. Draws inferences from maps by applying previously-learned concepts and generalizations.

S. Sets up hypotheses.

S. Tests hypotheses against data.

G. The significance of location depends upon cultural developments both within and outside a country.

G. The topography of a region may present limitations given a specific level of technology; however, man has learned to overcome many of the earlier limitations.

9. The U.S.S.R. has vast water po
tial.

a. It has many sources of wate
the southern and eastern mo
ever, many of the potential
not close to major concentr
population or industry and
rivers are frozen much of t

b. The lack of much relief on
of the Soviet plains has ma
on these plains flow very s
much of their course. This
river transportation easier
dicapped the development of
Man can overcome the lack o
falls by building dams, but
steep banks along some of t
has made even dam-building
some of the rivers.

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cance of location de-
cultural developments
and outside a country.

aphy of a region may pre-
tions given a specific
echnology; however, man
to overcome many of
limitations.

9. The U.S.S.R. has vast water power potential.

   a. It has many sources of water power in the southern and eastern mountains; however, many of the potential sources are not close to major concentrations of population or industry and many of the rivers are frozen much of the year.

   b. The lack of much relief on large parts of the Soviet plains has made the rivers on these plains flow very slowly over much of their course. This has made river transportation easier but has handicapped the development of water power. Man can overcome the lack of natural falls by building dams, but the lack of steep banks along some of the rivers has made even dam-building difficult on some of the rivers.

	pects" in Th eds. Focus o pp. 185-193.
33. Call the attention of the class to the physical map and to a rainfall map once more. Ask: What possible sources do you see for the development of water power? How useful would the southern and eastern mountains be as a source of water power? Why?	Physical map Rainfall map
Now show pupils maps and pictures of some of the plains areas through which Soviet rivers flow. Ask: What effect do you think this kind of relief would have upon the ease of moving boats over these rivers? Upon the possibilities of using the rivers for water power? (Discuss possibilities without dams. Discuss difficulties of building dams in some of these areas.)	Lydolph, Ge pp. 10, 83 Cressey, Sov pp. 38, 95, Filmstrips: Un., S.V.E.,
Have several pupils check in geography texts to find out more about water power developments and the problems facing the Soviets as they try to build dams.	Kohn and Dru day, p. 388,
Project a map showing hydroelectric developments in the U.S.S.R. and have pupils test their hypotheses against it. Does the lack of development in eastern mountains	Lydolph, Ge p. 241, col.

	pects" in Thoman and Patton, eds. Focus on Geog. Activity, pp. 185-193.
ttention of the class to the physical map and all map once more. Ask: What possible sources for the development of water power? How use- the southern and eastern mountains be as a water power? Why?	Physical map of the U.S.S.R. Rainfall map of the U.S.S.R.
pupils maps and pictures of some of the plains ough which Soviet rivers flow. Ask: What ef- u think this kind of relief would have upon f moving boats over these rivers? Upon the ies of using the rivers for water power? (Dis- ibilities without dams. Discuss difficulties g dams in some of these areas.)	Lydolph, Geog. of the U.S.S.R., pp. 10, 83 (maps). Cressey, Sov. Potentials, pp. 38, 95, 99, 114 (pictures.) Filmstrips: Nat'l. Res. in Sov. Un., S.V.E., frames 20-22, 26.
ral pupils check in geography texts to find out water power developments and the problems e Soviets as they try to build dams.	Kohn and Drummond, World Today, p. 388, 379.
map showing hydroelectric developments in the and have pupils test their hypotheses against the lack of development in eastern mountains	Lydolph, Geog. of the U.S.S.R. p. 241, col. 2.

S. Draws inferences from maps by applying previously-learned concepts and generalizations.

S. Sets up hypotheses.

G. Climate may set up limitations upon man's activities, given a specific level of technology, but man has learned to overcome many of the earlier limitations.

S. Tests hypotheses against data.

G. Vegetation is affected by temperature and precipitation.

G. Pheonomena are distributed unevenly over the earth's surface, resulting in great diversity or variability from one place to another.

G. Unevenly-distributed phenomena form distinctive patterns on the map.

S. Draws inferences from maps by applying previously-learned concepts and generalizations.

S. Sets up hypotheses.

C. Types of agriculture in a region
a nation's cultural values, perce
technology as well as upon climat
and physical relief.

1. The climate has affected veget
and the development of agricul
man is learning to overcome so
previous limitations upon agri

a. The climate has affected th
of natural vegetation.

1) The U.S.S.R. may be divi
major vegetation zones o
taiga, steppe, and deser

2) There is a small area of
cal vegetation near the

3) Vegetation in the southe
depends upon elevation a
or southern exposure whi
both rainfall and temper

b. The climate and vegetation
soils in the Soviet Union,
are also affected by the ki
in the region, the movement
through various types of er
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set up limitations upon
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recipitation.

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earth's surface, result-
t diversity or variabili-
place to another.

stributed phenomena form
patterns on the map.

nces from maps by ap-
iously-learned concepts
izations.

otheses.

C. Types of agriculture in a region depend upon a nation's cultural values, perceptions, and technology as well as upon climate, soils, and physical relief.

1. The climate has affected vegetation, soils, and the development of agriculture, although man is learning to overcome some of the previous limitations upon agriculture.

    a. The climate has affected the development of natural vegetation.

        1) The U.S.S.R. may be divided into four major vegetation zones of tundra, taiga, steppe, and desert.

        2) There is a small area of sub-tropical vegetation near the Black Sea.

        3) Vegetation in the southern mountains depends upon elevation and northern or southern exposure which affects both rainfall and temperature.

    b. The climate and vegetation have affected soils in the Soviet Union, although soils are also affected by the kind of rocks in the region, the movement of soil through various types of erosion and glaciation.

prove that there is no potential there? Why or why not? Quote Lydolph on the potential in this area.

34. Have pupils consider all of the other maps which they have examined thus far. Discuss: How do you think climate would affect vegetation and agricultural production in different parts of the U.S.S.R.? (How would it affect types of vegetation? The soil? The kinds of crops grown? The distribution of crops? Other uses to which the land might be put?) Remind pupils that most field crops developed up to the present time need at least 100 days free from frost.

35. Have pupils examine a map of natural vegetation. (Be sure to include a map showing marshlands.) Show pictures of vegetation. Discuss: Were your hypotheses correct or do you need to modify them? How do you account for differences in different parts of the Soviet Union?

For maps, se
of the U.S.S.
Cressey, Sov.
pp. 4-5;
atlases of th
or frame 28
Nat'l. Res.
S.V.E.

36. Review what pupils learned in earlier grades about the factors affecting soil development and the effects of soil upon growing crops. Or, if necessary, have pupils read a brief description of these factors and effects.

Kohn and Drum
Today, pp. 6

t there is no potential there? Why or why not?
dolph on the potential in this area.

ls consider all of the other maps which they
ined thus far. Discuss: How do you think
would affect vegetation and agricultural produc-
different parts of the U.S.S.R.? (How would it
ypes of vegetation? The soil? The kinds of
wn? The distribution of crops? Other uses
the land might be put?) Remind pupils that
d crops developed up to the present time need
100 days free from frost.

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include a map showing marshlands.) Show pic-
vegetation. Discuss: Were your hypotheses
or do you need to modify them? How do you ac-
differences in different parts of the Soviet

For maps, see Lydolph, *Geog. of the U.S.S.R.*, p. 18; Cressey, *Sov. Potentials*, pp. 4-5; atlases of the Soviet Union, or frame 28 in filmstrip: *Nat'l. Res. of the Sov. Un.*, *S.V.E.*

hat pupils learned in earlier grades about the
affecting soil development and the effects of
growing crops. Or, if necessary, have pupils
rief description of these factors and effects.

Kohn and Drummond, *World Today*, pp. 67-74.

S. Tests hypotheses against data.

G. Nature changes the face of the earth through biotic processes.

G. The soil type in a particular place is affected by the type of basic rock in the region, the climate, vegetation, erosion, wind, and glaciers as well as by how man treats the soil.

S. Draws inferences from maps by applying previously-learned concepts and generalizations.

S. Sets up hypotheses.

S. Tests hypotheses against data.

G. Types of agriculture in a region depend upon man's cultural values perceptions and technology as well as upon climate, soils and topography.

G. The land in hot regions dries fast as the warm air picks up moisture; therefore, more rain is needed to grow crops in these regions than in regions which are not so hot.

1) The effects of climate
degree of leaching beca
the amount of humus in
the result of natural v
and the degree to which
wind and water erosion;
affected by man's use o

2) Permafrost has also bee
cause of poor drainage
northern Russia.

c. The climate, landforms, an
affected agriculture, alth
learned to overcome some o
limitations.

1) Much of southern, centra
ern U.S.S.R. has too li
existing crops unless l
rigated; even the best
the Soviet Union is sub
threat of drought.

2) The areas of the U.S.S.
the least rain are also

otheses against data.

anges the face of the
ough biotic processes.

type in a particular
affected by the type of
: in the region, the
vegetation, erosion, wind,
ers as well as by how man
e soil.

ences from maps by ap-
viously-learned concepts
alizations.

ypotheses.

otheses against data.

griculture in a region
on man's cultural values
ns and technology as well
limate, soils and topog-

n hot regions dries fast
m air picks up moisture;
more rain is needed to
in these regions than in
ich are not so hot.

1) The effects of climate include the degree of leaching because of rain, the amount of humus in the soil as the result of natural vegetation, and the degree to which there is wind and water erosion; soil is also affected by man's use of the soil.

2) Permafrost has also been an important cause of poor drainage in much of northern Russia.

c. The climate, landforms, and soil have affected agriculture, although man has learned to overcome some of the earlier limitations.

   1) Much of southern, central, and eastern U.S.S.R. has too little rain for existing crops unless land can be irrigated; even the best farmland in the Soviet Union is subject to the threat of drought.

   2) The areas of the U.S.S.R. which get the least rain are also the areas

Now show the class rainfall and vegetation maps of the Soviet Union again. In which parts of the country would they expect the most leaching? In which parts of the country would they expect the most acid soils? In which part would they expect the richest soils? In which part would they expect the greatest wind erosion? Recall what pupils learned earlier about permafrost. In what areas would they find poor soil drainage?

Rainfall and V
maps of the U.
(See above.)

Have pupils check these guesses against a soils map.

See atlases of

37. Have the class compare the soils map with the rainfall map. In what soil regions does the U.S.S.R. get the best rainfall for crops? the least rainfall? What kind of rainfall does the best soil region get? Have pupils look at the temperature map again. What would they expect to be true of evaporation in different parts of the Soviet Union? Is evaporation greater where rainfall is heaviest or where it is scarce? How does evaporation affect agriculture? Compare the rainfall in the black earth region of the U.S.S.R. with that in the black earth region of the U.S. Ask: Why does the U.S.S.R. need slightly less rainfall than the U.S. does for agricultural crops? (The U.S. needs about 20 inches a year; the U.S.S.R. can get by with about 15 inches a year.) Where do you think crops would be grown in the Soviet Union? What kinds of crops? Where do you think there would be dairying? grazing?

See atlases an
ed., Encycl.
Sov. Union, pp

Now compare the temperature, rainfall, soils and physical maps with a map showing those parts of the Soviet Union which are cultivated. Have pupils identify the

Lydolph, Geog.
p. 298.
Cressey, Sov.

he class rainfall and vegetation maps of the
ion again. In which parts of the country
expect the most leaching? In which parts of
ry would they expect the most acid soils? In
t would they expect the richest soils? In
t would they expect the greatest wind erosion?
at pupils learned earlier about permafrost.
reas would they find poor soil drainage?

Rainfall and Vegetation
maps of the U.S.S.R.
(See above.)

ls check these guesses against a soils map.

See atlases of Soviet Union.

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fall for crops? the least rainfall? What kind
ll does the best soil region get? Have pupils
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See atlases and Florinsky, ed., Encycl. of Russ. and the Sov. Union, pp. 526-28.

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with a map showing those parts of the Soviet
ch are cultivated. Have pupils identify the

Lydolph, Geog. of the U.S.S.R., p. 298.
Cressey, Sov. Potentials,

S. Draws inferences from tables and graphs.

A. RESPECTS EVIDENCE EVEN WHEN IT CONTRADICTS PRECONCEPTIONS.

G. Man uses his physical environment in terms of his cultural values, perceptions, and level of technology.

S. Tests hypotheses against data.

G. Differing crops need differing amounts of rainfall and differing temperatures and number of frost-free days in order to grow; they need water and dryness at different times during their period of growth.

with the highest tempe
so the most evaporatio
of evaporation is also
when dams are built fo
purposes.

3) Much of the northern p
is too cold (with too
days) for many kinds o
even most crops under
nological developments

4) Only about 10½ per cen
is arable; another 16.
used for hay crops and
animals (other than re
Soviets cultivated abo
more land than was cul
U.S. in 1960.

2. The kinds of crops grown are
the basis of cultural as wel
factors.

a. The type of agricultural
kinds of crops grown are
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heses against data.

rops need differing a-
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n order to grow; they
and dryness at differ-
uring their period of

with the highest temperatures and so the most evaporation; the amount of evaporation is also important when dams are built for irrigation purposes.

3) Much of the northern part of the U.S.S.R. is too cold (with too few frost-free days) for many kinds of crops and even most crops under existing technological developments.

4) Only about 10½ per cent of the land is arable; another 16.6 per cent is used for hay crops and pasture for animals (other than reindeer). The Soviets cultivated about 50 per cent more land than was cultivated in the U.S. in 1960.

2. The kinds of crops grown are selected on the basis of cultural as well as physical factors.

   a. The type of agricultural activity and kinds of crops grown are affected in part by climate, soil, and landforms.

fertile triangle, as shown on this map. They should also identify the climatic, vegetation, soil and landform characteristics of the area within the triangle.

pp. 4-5.
Deasy, et.al
p. 576.

38. Show the class a pie graph on land-use in the U.S.S.R. Ask: What proportion of the land is cultivated for food crops? What part is used for hay and pasture?

Show pupils a chart comparing the amount of sown cropland (1960) in the U.S.S.R. and in the U.S. Compare the amount in each with the population in each country. Is the difference important? What factor must be considered in deciding which country is better off in terms of agricultural resources?

Now show the class a chart comparing the yield per acre for a number of crops in the U.S. and in the U.S.S.R. How can pupils account for this difference? What might be factors other than soil types, temperature, and rainfall?

Lydolph, Geo
p. 284 (pie
(table compa
acre), p. 28
ing cultivat
two countrie

39. Show pupils a series of maps on agricultural production in the Soviet Union. Ask: Were your earlier hypotheses correct? Have pupils compare these maps once more with soil, rainfall, temperature, vegetation and physical maps to help them understand better why certain crops are grown in certain places and why other types of agricultural production are carried on in areas where there is little cultivated land.

Deasy, World
pp. 577-78,
Lydolph, Geo
pp. 301-314,

triangle, as shown on this map. They should also the climatic, vegetation, soil and landform ristics of the area within the triangle.	pp. 4-5. Deasy, et.al., World's Nations, p. 576.
class a pie graph on land-use in the U.S.S.R. at proportion of the land is cultivated for food What part is used for hay and pasture?	Lydolph, Geog. of the U.S.S.R., p. 284 (pie graph), p. 285 (table comparing yield per acre), p. 280 (table comparing cultivated land in the two countries).
pils a chart comparing the amount of sown crop- 960) in the U.S.S.R. and in the U.S. Compare the n each with the population in each country. Is ference important? What factor must be consider- eciding which country is better off in terms of tural resources?	
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G. Man uses his physical environment in terms of his cultural values, perceptions, and level of technology.

S. Sets up hypotheses.

A. IS SCEPTICAL OF THE FINALITY OF KNOWLEDGE; CONSIDERS GENERALIZATION AND THEORIES AS TENTATIVE, ALWAYS SUBJECT TO CHANGE IN THE LIGHT OF NEW EVIDENCE.

b. The type of agricultural
the kinds of crops grown
in part by man's cultura
technological knowledge.

1) The Soviets are rotat
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2) The Soviet Union is c
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places where some of
can be grown.

3. The Soviet Union is using m
to try to expand the areas
grow crops; it has already
cultiated area by about 73
tween 1928 and 1958.

a. The government has been
vast irrigation projects
swamplands.

b. The government has opene
farms in relatively dry
gin Land areas) and has
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ns, and level of tech-

ypotheses.

ICAL OF THE FINALITY OF
E; CONSIDERS GENERALIZA-
THEORIES AS TENTATIVE,
UBJECT TO CHANGE IN THE
NEW EVIDENCE.

b. The type of agricultural activity and the kinds of crops grown are affected in part by man's cultural values and technological knowledge.

1) The Soviets are rotating crops within the main wheat-growing area in order to maintain soil fertility.

2) The Soviet Union is changing some of the crops because of a new desire for certain crops not grown in abundance earlier and because of new places where some of the old crops can be grown.

3. The Soviet Union is using many approaches to try to expand the areas in which it can grow crops; it has already increased its cultiated area by about 73 per cent between 1928 and 1958.

a. The government has been developing vast irrigation projects and draining swamplands.

b. The government has opened up new wheat farms in relatively dry areas (the Virgin Land areas) and has used dry-farming techniques in these areas.

40. Ask: Do you think physical features and climate determine where the crops are grown? Why or why not? Tell the class about recent changes in crops with a switch to greater corn production in the Ukraine because of desires of the people. Use other examples, or have pupils point out examples, of places in which a number of crops are grown or could be grown and where the kinds grown are affected by cultural choice.

Have pupils read a brief description of agricultural crops and other land use in different parts of the Soviet Union.

Kohn and Dr
day, pp. 38
Deasy, Worl
604, 609.

41. Ask: Suppose you are a Soviet agricultural expert and you want to expand the amount of cultivated land in the U.S.S.R. What might you do? What has been done in the U.S. to expand cultivated land? (If necessary ask additional questions about what has been done in this country to expand cultivated land in dry and swampy areas.)

42. Show pupils a physical map of the U.S.S.R. once more. Where are possible sources of water for irrigation in the dry areas? Now show pupils a map of irrigated lands in the Soviet Union and point out proposed projects.

Physical ma
Lydolph, Ge
p. 287 (map
lands).

43. Now have pupils read brief descriptions of ways in which the Soviets are trying to expand cultivated areas and the food supply. Discuss: To what degree do you think each of these techniques will be successful in expanding areas of cultivated land?

Meyer and S
in World Sc
96, 594-59
Cressey, Sc
pp. 165-66

you think physical features and climate deter-
re the crops are grown? Why or why not? Tell
s about recent changes in crops with a switch
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the people. Use other examples, or have pupils
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d other land use in different parts of the So-
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Kohn and Drummond, World Today, pp. 380-382.
Deasy, World's Nations, pp. 604, 603.

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Physical map of the U.S.S.R.
Lydolph, Geog. of the U.S.S.R., p. 287 (map of irrigated lands).

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these techniques will be successful in expand-
s of cultivated land?

Meyer and Streitelmeir, Geog. in World Society, pp. 395-96, 594-595.
Cressey, Sov. Potentials, pp. 165-66.

G. Man uses his physical environment in terms of his cultural values, perceptions, and level of technology.

G. Climate may set up limitations upon man's activities given a specific level of technology, but man has learned to overcome many of the earlier limitations.

G. Types of agriculture in a region depend upon man's cultural values, perceptions, and level of technology as well as upon climate, soils, and topography.

S. Draws inferences from a comparison of different map patterns of the same area.

S. Sets up hypotheses.

S. Interprets map symbols (dots and hatching).

c. Agricultural experts are
velop food plants which
such a long growing seas

d. Agricultural experts are
with techniques for warm
and/or the seed in order
in tundra areas which o
not grow there.

e. The Soviet Union grows
in greenhouses in very
they wish to have towns
vide them with food.

D. The population distribution is
to the distribution of agricu
although this distribution is
what as new mineral and power
opened up.

1. Most of the people live in
triangle" between Leningra
Novosibersk. This area co
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country.

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may set up limitations up-
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s well as upon climate,
nd topography.

ferences from a comparison
rent map patterns of the
a.

hypotheses.

ts map symbols (dots and
).

c. Agricultural experts are trying to develop food plants which do not need such a long growing season.

d. Agricultural experts are experimenting with techniques for warming the soil and/or the seed in order to grow crops in tundra areas which otherwise would not grow there.

e. The Soviet Union grows some vegetables in greenhouses in very cold areas where they wish to have towns and must provide them with food.

D. The population distribution is closely related to the distribution of agricultural resources, although this distribution is changing somewhat as new mineral and power resources are opened up.

1. Most of the people live in the "fertile triangle" between Leningrad, Odessa, and Novosibersk. This area comprises only about one-eighth of the land area of the country.

Now have a pupil report on his investigations of the success of the Virgin Lands project. Or prepare tables using data from Schwartz on what happened to production in the Virgin Lands. Project in class and have pupils discuss: How successful has the Virgin Lands Project been? Quote brief excerpts from Schwartz on the results.

Deasy, World's Nat
609-610, 619-20.
Mellor, Geog. of t
pp. 191-194.
Lydolph, Geog. of
pp. 286, 288.
Whiting, Sov. Unio
pp. 184-187.
Center's paper on
Agricultural Culti
the U.S.S.R."
For more details o
paign and results
Lands experiment,
Sov. Economy Since
63-65, 75, 106-108
164.

.. Invite a local county agent or an agricultural specialist to talk to the class about ways in which technical developments have made it possible to grow certain crops in areas which formerly were too far north or too dry. He might use examples from the U.S. but also describe some of the new developments in the Soviet Union if he knows about them.

45. Have pupils refer once again to the different maps of the Soviet Union which they have used before. Ask: Where do you think you would find heavy population densities? Medium population densities? Light population densities? Perhaps have pupils make up a population map using a three-symbol key to show what they think the population pattern would be like.

Population density
viet Union. For e
see Lydolph, Geog.
U.S.S.R., p. 271,
Sov. Potentials,
Kohn and Drummond
day, p. 373, or a

Now show pupils a population map of the U.S.S.R. (Show a dot map and compare it with an isoline or color bar il report on his investigations of the Virgin Lands project. Or prepare tables m Schwartz on what happened to production Lands. Project in class and have pupils successful has the Virgin Lands Project rief excerpts from Schwartz on the results.

Deasy, World's Nations, pp. 609-610, 619-20.
Mellor, Geog. of the U.S.S.R., pp. 191-194.
Lydolph, Geog. of the U.S.S.R., pp. 286, 288.
Whiting, Sov. Union Today, pp. 184-187.
Center's paper on "Expanding Agricultural Cultivation in the U.S.S.R."
For more details on the campaign and results of the Virgin Lands experiment, see Schwartz, Sov. Economy Since Stalin, pp. 63-65, 75, 106-108, 131-132, 164.

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Population density map of Soviet Union. For example, see Lydolph, Geog. of the U.S.S.R., p. 271, or Cressey, Sov. Potentials, 32-33, or Kohn and Drummond, World Today, p. 373, or atlases.

s a population map of the U.S.S.R. (Show compare it with an isoline or color bar

G. Population distribution reflects man's values and his technology as well as climate, topography and resources of an area.

G. Population is distributed unevenly over the earth's surface; many of the land areas are thinly populated.

G. Unevenly-distributed phenomena form distinctive patterns on the map.

S. Tests hypotheses against data.

S. Sets up hypotheses.

G. The degree of horizontal mobility within a society can have important effects upon society.

G. Population distribution reflects man's values and his technology as well as climate, topography and resources of an area.

G. Man uses his physical environment in terms of his cultural values, perceptions, and level of technology.

2. There are small population concen
in the valleys and lowlands of th
and Crimea regions which are main
tropical and in the subtropical o
Soviet Middle Asia.

3. About 4 percent of the population
along the Trans-Siberian railway
the eastern tip of the triangle t
Pacific.

4. Only about one percent of the pop
is distributed through the rest o
country.

5. The population distribution is ch
somewhat as new areas of agricult
opened up by irrigation projects,
railroads and other types of tran
tion are developed, and as new re
or industrial areas are developed
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2. There are small population concentrations in the valleys and lowlands of the Caucuses and Crimea regions which are mainly subtropical and in the subtropical oases of Soviet Middle Asia.

3. About 4 percent of the population lives along the Trans-Siberian railway between the eastern tip of the triangle to the Pacific.

4. Only about one percent of the population is distributed through the rest of the country.

5. The population distribution is changing somewhat as new areas of agriculture are opened up by irrigation projects, as new railroads and other types of transportation are developed, and as new resources or industrial areas are developed outside the fertile triangle. The greatest population density is still found west of the Urals but the proportion of the total population in this area is decreasing as sections in and east of the Urals are developed more intensively.

map with their own maps. If they are different, what accounts for the differences? Discuss: Why do you think the population density map looks the way it does? (Relate population density to kinds of agricultural use of land.) There are large areas of the Soviet Union which are practically empty of people. Do you think these areas offer great potential for future population expansion as the world becomes more crowded? Where do you think the population is most likely to increase in the future?

46. Now show pupils a population density map of pre-World War II vintage. Have pupils compare the two density maps. What changes do they see? Or have pupils study the map showing population changes from 1939 to 1959 in Lydolph. What factors might account for these changes?

Lydolph, Geog. of t
U.S.S.R., p. 273.

Project graphs showing population densities and changes in population in different regions of the Soviet Union. Which regions are increasing most rapidly? Which regions are growing the most slowly? How can pupils account for these differences? (Let pupils set up hypotheses to test later.)

Lydolph, Geog. of
U.S.S.R., p. 273.

47. Have a pupil make a graph comparing the population density in his own state, in New York, and in New Mexico with the population densities in different parts of the Soviet Union. Discuss.

See World Almanac
tion densities in
Lydolph, Geog. of
pp. 271-272.

own maps. If they are different, what
he differences? Discuss: Why do you
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Lydolph, Geog. of the
U.S.S.R., p. 273.

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Lydolph, Geog. of the
U.S.S.R., p. 273.

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Discuss.

See World Almanac for popula-
tion densities in U.S. states.
Lydolph, Geog. of the U.S.S.R.,
pp 271-272.

S. Sets up hypotheses.

S. Tests hypotheses against data.

G. Some things can be produced better in one place than in another because of climate, resources, access to markets, people's skills, etc.

A. RESPECTS EVIDENCE EVEN WHEN IT CONTRADICTS PRECONCEPTIONS.

E. The distribution of Russian indus
ters and cities is related to the
of known power and mineral resour
ularly coal and iron), to the loc
markets, and to the historical de
cities, which provided skilled wo
markets and better transportation

1. Two of the five major industria
(Moscow and Leningrad) are not
near either rich coal or iron
any quantity. They developed
try, however, and their markets
labor, electrical plants, trans
facilities and housing faciliti
bor still encourage the growth

2. Three of the five major indust
are located west of the Urals
most easily invaded across the
third of these regions is the
Ukraine region centered around
based on important coal and ir

3. Because of the exposure of the
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E. The distribution of Russian industrial centers and cities is related to the location of known power and mineral resources (particularly coal and iron), to the location of markets, and to the historical development of cities, which provided skilled workers and markets and better transportation facilities.

1. Two of the five major industrial regions (Moscow and Leningrad) are not located near either rich coal or iron deposits of any quantity. They developed early industry, however, and their markets, skilled labor, electrical plants, transportation facilities and housing facilities for labor still encourage the growth of industry.

2. Three of the five major industrial regions are located west of the Urals in the area most easily invaded across the plains. The third of these regions is the southeastern Ukraine region centered around Kiev and based on important coal and iron resources.

3. Because of the exposure of these three industrial regions, the Soviet Union began to shift industrial development further east to the Urals and the region past the Urals. This shift has been continued since

Discuss: When is an area or country overpopulated? (Can one tell from population density figures? Is overpopulation present when a particular place cannot raise enough food to feed the people in the place? Is an area underpopulated if there are no people living in it?)

Mellor, Geog. of tl
map p. 118.
Cressey, Sov. Poter
map pp. 32-33.

48. Have pupils look at the population map of the U.S.S.R. once more. Where are the major cities? Show a graph which some pupil has made to compare the sizes of some of the larger cities of the U.S.S.R. with some of those in the U.S. Show another pupil-made graph comparing the number of cities over 1 million in population in the U.S. and the U.S.S.R.

Now have pupils look at a map of major industrial centers. Ask: What do you expect to find close to a major industrial center? Have pupils examine a map of mineral and power resources in the Soviet Union. Ask: What two major cities and industrial centers are not located close to rich coal or iron ore deposits? Can you think of any reasons why these cities of Moscow and Leningrad are important industrial centers despite this drawback? Show pupils a map of the flow of goods to and from Moscow. Have pupils read about the Moscow and Leningrad areas to test their ideas about why they became great industrial centers.

Now ask: Suppose you had been the Soviet planners during the 1930's and wished to decide where to build new industrial plants. What factors would you have considered? (Have pupils list kinds of factors and make sure that you ask additional questions to bring out some of the factors they omit.)

For population den
of the U.S.S.R., s
ity above. For dat
ulation of Soviet
see Lydolph, Geog.
U.S.S.R., pp. 276-
Holt and Turner, S
p. 37.
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World Almanac. Fo
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Lydolph, p. 354 (i
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Union; Wheeler, et
gional Geog. of th
day, p. 251; Lydol
331; Kohn and Drum
Today, p. 388. Fo
material on Moscow
Leningrad areas se
pp. 32-37, 112; Cr
Potentials, pp. 1
135; Deasy et. al.
Nations, pp. 571-
et. al., pp. 252-

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Mellor, Geog. of the U.S.S.R., map p. 118.
Cressey, Sov. Potentials, map pp. 32-33.

For population density map of the U.S.S.R., see activity above. For data on population of Soviet cities, see Lydolph, Geog. of the U.S.S.R., pp. 276-277 or Holt and Turner, Sov. Union, p. 37.
For data on U.S. cities, see World Almanac. For maps of coal and iron deposits see Lydolph, p. 354 (iron), 334, 336 (coal).
For map showing flow of goods to Moscow, see Lydolph, p. 35.
For maps of industrial regions, see atlases of the Soviet Union; Wheeler, et. al., Regional Geog. of the World Today, p. 251; Lydolph, pp. 329, 331; Kohn and Drummond, World Today, p. 388. For reading material on Moscow and the Leningrad areas see: Lydolph, pp. 32-37, 112; Cressey, Sov. Potentials, pp. 120 -124, 128-135; Deasy et. al., World's Nations, pp. 571-78, Wheeler et. al., pp. 252-253.

G. Man uses his physical environment in terms of his cultural values, perceptions, and level of technology.

G. The significance of location depends upon cultural developments both within and outside of a country.

G. Some things can be produced better in one place than in another because of climate, resources, transportation routes, access to resources, access to markets, people's skills, etc.

the war, and has been accentuate
discovery of new mineral deposits

a. The Urals region has excellen
deposits and many other miner
though it lacks good coke for
steel, coal has been imported
portant steel-making and mach
industries.

b. The Kuznetsk Novosibirsk manu
region has excellent coal dep
brings in iron from the Urals
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iron deposits in other nearby
are also helping to make this
important center for heavy in

4. Other industrial areas are being
and developed due to major sourc
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the war, and has been accentuated by the discovery of new mineral deposits.

a. The Urals region has excellent iron ore deposits and many other minerals. Although it lacks good coke for making steel, coal has been imported for important steel-making and machine-making industries.

b. The Kuznetsk Novosibirsk manufacturing region has excellent coal deposits and brings in iron from the Urals in exchange for its coal (so that box cars do not travel empty either way). New iron deposits in other nearby regions are also helping to make this area an important center for heavy industry.

4. Other industrial areas are being planned and developed due to major sources of power or deposits of minerals.

Have pupils try to decide from the information given on the maps, why the southeastern Ukraine region, the Urals region and the Kuznets region are such important industrial centers. Discuss: What problems would the Urals region face in building up a steel industry? What problems would the Kuznets region face?

49. Have a pupil give an oral report on the system which was built up to connect the Urals Magnitogorsk with Kuznetsk in order to overcome the lack of good coal in one and good iron in the other. Point out the recent discoveries of iron ore near the Kuznetsk Basin.

Lydolph, Geog. of t
pp. 219-220.
Wheeler, et. al., R
of the World, p. 25

50. Now have pupils look at a map to identify other rich sources of iron and coal. Are they close to any industrial center? Is it likely that an industrial center will be built in the area? Why or why not? What kind of transportation facility is available or could be provided to transport the raw material to an existing industrial center.

Map of resources of
See atlases and Cre
Sov. Potentials, 70
Lydolph, Geog. of t
336, 342, 345, 361,
frame 43 in Filmstr
Res. of the Sov. Un

51. Have pupils look at a map to identify some of the newer industrial developments which are growing rapidly or which have sprung up in unoccupied areas. What are the advantages and disadvantages of each area? (or of some of them). Perhaps have pupils report on some of these new cities.

Map of industrial
(see activity 48).

to decide from the information given on
he southeastern Ukraine region, the Urals
Kuznets region are such important indus-
Discuss: What problems would the Urals
building up a steel industry? What prob-
Kuznets region face?

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connect the Urals Magnitogorsk with
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iron ore near the Kuznetsk Basin.

Lydolph, Geog. of the U.S.S.R., pp. 219-220.
Wheeler, et. al., Reg. Geog. of the World, p. 254-55.

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Is it likely that an industrial center
in the area? Why or why not? What kind
ion facility is available or could be pro-
port the raw material to an existing in-
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Map of resources of U.S.S.R. See atlases and Cressey, Sov. Potentials, 70-71, Lydolph, Geog. of the U.S.S.R., 336, 342, 345, 361, 363; or frame 43 in Filmstrip: Nat'l. Res. of the Sov. Un., S.V.E.

ok at a map to identify some of the newer
elopments which are growing rapidly or
ung up in unoccupied areas. What are the
disadvantages of each area? (or of some of
s have pupils report on some of these new

Map of industrial regions (see activity 48).

S. Interprets graphs. (Looks for misleading graphic devices. Draws inferences from graphs.)

S. Chooses appropriate reference book to locate information.

S. Interprets graphs. (Draws inferences from graphs.)

A. RESPECTS EVIDENCE EVEN WHEN IT CONTRADICTS PRECONCEPTIONS.

S. Checks on the completeness of data.

F. The Soviet Union has greater power eral resources than any nation in although production is not so grea some other countries.

1. The Soviet Union is among the t three producers of many of the erals and power resources.
2. The U.S.S.R. is more nearly sel in terms of kinds of minerals n industry than any other country world.

phs. (Looks for mis-
c devices. Draws
m graphs.)

riate reference book
rmation.

phs. (Draws infer-
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ENCE EVEN WHEN IT CON-
ONCEPTIONS.

completeness of data.

F. The Soviet Union has greater power and mineral resources than any nation in the world, although production is not so great as in some other countries.

   1. The Soviet Union is among the top two or three producers of many of the key minerals and power resources.

   2. The U.S.S.R. is more nearly self-sufficient in terms of kinds of minerals needed for industry than any other country in the world.

52. Have pupils examine the graphs shown in Soviet publications on growth in production in certain areas over the past few years. Choose graphs which do not use a scale beginning with zero. Have pupils analyze these graphs, picking out the device by which the increase in recent years is exaggerated. Have pupils now make a graph showing the same data but with the scale beginning at zero. Compare the two graphs.	e.g. See U.S.S.R., Life Today, Octobe p. 14. (graphs on in production of n gas, mineral ferti cotton, and textil tral Asian region
53. Show pupils graphs comparing U.S.S.R. reserves and production of a number of major minerals and power resources, with those in other countries including the U.S. Or have pupils prepare such graphs from figures found in different reference books. Before they begin work, discuss reference works which can be used to locate the needed data.	Atlases on U.S.S.R Almanacs.
54. Have pupils read differing accounts in textbooks to find out if the Soviet Union lacks any important resources needed for industry. (Have some pupils look at older texts and some at newer ones and compare them. In some cases it will be found that older texts mention a lack of some resources but a newer text reports a recent discovery of this resource.) Where texts differ, ask pupils about date of ther text copyright. Why does the date make a difference?	Kohn and Drummond, day, pp. 386-389; Scholastic Book Se editors, Sov. Unio 13; Schwartz, Sov. Uni let), pp. 23-25; Cressey, Sov. Pote ch. 4; Lydolph, Geog. of pp. 332-367; Mellor, Geog. of t ch. 7; Wheeler et. al., R of the World, pp.

amine the graphs shown in Soviet publica-
) in production in certain areas over the
. Choose graphs which do not use a scale
zero. Have pupils analyze these graphs,
e device by which the increase in recent
erated. Have pupils now make a graph show-
ata but with the scale beginning at zero.
) graphs.

e.g. See U.S.S.R., Soviet Life Today, October, 1964, p. 14. (graphs on increases in production of natural gas, mineral fertilizer, cotton, and textiles in Central Asian region of U.S.S.R.)

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umber of major minerals and power resources,
other countries including the U.S. Or
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Atlases on U.S.S.R.
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ther text copyright. Why does the date
nce?

Kohn and Drummond, World Today, pp. 386-389;
Scholastic Book Services editors, Sov. Union, pp. 11-13;
Schwartz, Sov. Union (pamphlet), pp. 23-25;
Cressey, Sov. Potentials, ch. 4;
Lydolph, Geog. of the U.S.S.R., pp. 332-367;
Mellor, Geog. of the U.S.S.R., ch. 7;
Wheeler et. al., Reg. Geog. of the World, pp. 229-230.

G. The significance of location depends upon cultural developments both within and outside a country.

G. A region is an area of one or more homogeneous features. The core area is highly homogeneous, but there are transitional zones where boundaries are drawn between different regions.

G. Regions are delimited on many different bases, depending upon the purpose of the study. Some are delimited on the basis of a single phenomenon, some on the basis of multiple phenomonena, and some on the basis of functional relationships.

* 3. The Soviet Union is handicapped
by the fact that some of the re
are located great distances fro
they are needed (for combinatio
other resources or for markets
to transportation routes).

G. The Soviet Union is obviously diff
describe as a whole; different par
country are quite different. The
may be divided into a number of ma
in terms of the use to which the l
the degree of urbanization, the am
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ality groupings with slightly diff
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3. The Soviet Union is handicapped somewhat by the fact that some of the resources are located great distances from where they are needed (for combination with other resources or for markets or distance to transportation routes).

G. The Soviet Union is obviously difficult to describe as a whole; different parts of the country are quite different. The country may be divided into a number of major regions in terms of the use to which the land is put, the degree of urbanization, the amount and type of industrialization, population density, and the numbers of different nationality groupings with slightly different cultures.

55. Have pupils look at maps once more while you point out some of the newly discovered mineral resources and the areas of potential water power in eastern Siberia. Discuss: How easy will it be for the Soviet Union to develop these resources? Perhaps quote Lydolph about the difficulties because of their distance from centers of population.	For a map of minera sources see Cressey, Potentials, pp. 70- see minerals map of and eastern Siberia dolph, Geog. of the p. 235. For a discussion of ties, see Lydolph, 244.
56. Perhaps divide the class into groups, letting each group investigate one of the Soviet regions in more detail. They should prepare maps, find pictures to display, and prepare bulletin boards, charts or written reports to be distributed to the other class members describing the key characteristics of their region and the important changes taking place in it. Then hold a class discussion on differences between these regions. Why do you think geographers have divided up the Soviet Union in this way? Do you think a geographer's regionalization might change as the years pass? Why or why not? Perhaps show a different regionalization of the Soviet Union and discuss the different criteria used in differentiating regions. Compare the two systems of regionalization.	Lydolph, Geog. of t map of regions on p most of chapters. Wheeler, Reg. Geog. World, ch. 13. Cressey, Sov. Poten chs. 6-8.
57. Have pupils take imaginary trips from Moscow to some other city in the U.S.S.R. and write one of the following to describe what they see and feel in the way of physical and cultural landscape and climate: a. A diary of their trip. b. A series of letters to a friend. c. A travel guide for other Americans.	

at maps once more while you point out
y discovered mineral resources and the
al water power in eastern Siberia. Dis-
will it be for the Soviet Union to de-
urces? Perhaps quote Lydolph about the
ause of their distance from centers of

he class into groups, letting each
e one of the Soviet regions in more de-
ld prepare maps, find pictures to dis-
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ributed to the other class members de-
characteristics of their region and the
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what they see and feel in the way of
tural landscape and climate:

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f letters to a friend.
uide for other Americans.

For a map of mineral resources see Cressey, Sov. Potentials, pp. 70-71. Or see minerals map of central and eastern Siberia in Lydolph, Geog. of the U.S.S.R., p. 235.
For a discussion of difficulties, see Lydolph, pp. 240-244.

Lydolph, Geog. of the U.S.S.R., map of regions on p. 26 and most of chapters.
Wheeler, Reg. Geog. of the World, ch. 13.
Cressey, Sov. Potentials, chs. 6-8.

S. Visualizes a generalized map of the U.S.S.R.

S. Checks on the completeness of data.

S. Interprets graphs. (Draws inferences from graphs.)

G. Changes in the birth and death rates or in the ratio between sexes can have important effects upon a society.

G. An increase in population occurs when the birth rate plus immigration is greater than the death rate plus emigration.

S. Interprets graphs and tables.(Draws inferences from graphs and tables.)

G. Changes in ... the ratio between sexes can have important effects upon a society.

G. Changing population patterns are h
portant effects upon the Soviet Un

1. For a long period of time durin
tury, population growth slowed
it has increased again.

   a. Although the population was
   it was increasing less rapid
   the U.S. In part this was d
   creasing industrialization a
   zation and in part to the hi
   rate of men during wars, civ
   purges.

   b. The birth rate has increased
   the death rate is declining,
   ulation is growing at a fast
   gain, although not so fast a
   countries.

2. The two world wars, the civil w
purges led to a great decimatio
compared with adult women. Thi
in the sex ratio has led the So
ment to use women widely in phy

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phs.)

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population occurs
rate plus immigra-
r than the death
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phs and tables.(Draws
n graphs and tables.)

the ratio between
important effects
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G. Changing population patterns are having important effects upon the Soviet Union.

1. For a long period of time during this century, population growth slowed down but it has increased again.

   a. Although the population was increasing, it was increasing less rapidly than in the U.S. In part this was due to increasing industrialization and urbanization and in part to the high death rate of men during wars, civil wars and purges.

   b. The birth rate has increased once more, the death rate is declining, and the population is growing at a faster rate again, although not so fast as in some countries.

2. The two world wars, the civil war and the purges led to a great decimation of men as compared with adult women. This imbalance in the sex ratio has led the Soviet government to use women widely in physical labor.

58. Give all pupils sheets of pages of the same size and have them try to draw rough outline maps of the U.S.S.R. from memory. They should include major cities, rivers, and land forms as well as the boundaries and names of countries bordering the U.S.S.R. Then compare some of the maps with an opaque projector. Discuss: Why is it helpful to have a visualized map of the U.S.S.R. in our minds?

59. Have a pupil prepare a graph comparing population growth in the U.S. and the U.S.S.R. over a period of fifty years. Pupils should note that some of the Russian figures are estimates. The pupil should use this graph in reporting to the class on changes in population growth in the U.S.S.R. and the reasons for them. Discuss: What implications do you see in the changing rate of population growth?

For data, see Lydol
of the U.S.S.R., pp
260.

60. Show pupils a graph and some tables on the sex ratio within different age groups in the Soviet Union. Discuss: Why do you think this imbalance between men and women in the over-40 age group exists? What effects do you think it might have?

Lydolph, Geog. of t
pp. 257-260.

sheets of pages of the same size and have
w rough outline maps of the U.S.S.R. from
hould include major cities, rivers, and
ell as the boundaries and names of coun-
the U.S.S.R. Then compare some of the
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the U.S.S.R. over a period of fifty years.
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pupil should use this graph in reporting
changes in population growth in the
e reasons for them. Discuss: What impli-
see in the changing rate of population

For data, see Lydolph, Geog. of the U.S.S.R., pp. 255-260.

raph and some tables on the sex ratio
t age groups in the Soviet Union. Dis-
ou think this imbalance between men and
er-40 age group exists? What effects do
ght have?

Lydolph, Geog. of the U.S.S.R., pp. 257-260.

S. Interprets graphs. (Draws inferences from graphs.)

G. Changes in the birth and death rates ... can have important effects upon a society.

S. Tests hypotheses against data.

S. Interprets graphs and tables. (Draws inferences from graphs and tables.)

S. Sets up hypotheses.

G. The degree of horizontal mobility within a society (including shifts of population from rural to urban areas) can have important effects upon society.

S. Sets up hypotheses.

G. Obstacles to communication may be social as well as physical.

3. The decline in the birth rate h
   in a much smaller group of youn
   who are coming of military age
   to work in industry. The gover
   changed its educational policie
   young people to work sooner tha
   years ago.

4. The rural-urban population rati
   ing to a much higher urban prop
   the U.S.S.R. is still far less
   than is the U.S.

H. Although about three-fourths of th
   tion is of Slavic descent, the Sov
   is peopled by many different natio
   groupings.

   1. There is a great diversity of c
      of languages spoken from one pa
      country to another.

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communication may be
ell as physical.

3. The decline in the birth rate has resulted in a much smaller group of young people who are coming of military age and of age to work in industry. The government has changed its educational policies to get young people to work sooner than a few years ago.

4. The rural-urban population ratio is shifting to a much higher urban proportion, but the U.S.S.R. is still far less urbanized than is the U.S.

H. Although about three-fourths of the population is of Slavic descent, the Soviet Union is peopled by many different nationality groupings.

   1. There is a great diversity of culture and of languages spoken from one part of the country to another.

Show pupils another graph showing the number of women in the labor force and read aloud a description of the ways in which women engage in hard physical labor in the U.S.S.R. (Perhaps show slides or pictures to illustrate this fact.)

61. Show pupils a graph of the distribution of the Soviet population by age groups. Discuss the implications of the small number of youths in the age bracket of 16-21.

Lydolph, Geog. of th
p. 268.

62. Project a graph showing changes in urban-rural relations in the U.S.S.R. and another graph comparing urbanization in the U.S. and in the U.S.S.R. Discuss: What are the implications of this change in the urban-rural ratio on the U.S.S.R.? (Compare the proportion of the rural population and the total agricultural production for the two countries.) Ask: What can you tell about agricultural productivity per farm worker in these two countries? Show table to test hypotheses.

Lydolph, Geog. of t
p. 295.
For figures on agri
productivity per fa
see Lydolph, p. 285

63. Show pupils, very briefly, a chart listing the many different nationalities represented in the Soviet Union. Also show a map of nationalities in the U.S.S.R. Pick out a few of these nationalities and have pupils find out if they have had their own nation at any time in the last 200 years. If so, why might this fact be important? Show a chart of the many different languages spoken in the Soviet Union. Discuss: What problems might arise from the fact that the Soviet Union has so many different nationalities and languages? Point out that pupils will study this question in more detail later.

For data on languag
former independence
Petrovich, Sov. Uni
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Lydolph, Geog. of t
pp. 261-270 (map ar
on number of nation
and discussion).
Deasy, et. al., Wor
p. 601 (map).
Cressey, Sov. Poter
23-30 (discussion

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age groups. Discuss the implications of
er of youths in the age bracket of 16-21.

Lydolph, Geog. of the U.S.S.R., p. 268.

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e total agricultural production for the two
sk: What can you tell about agricultural
er farm worker in these two countries?
test hypotheses.

Lydolph, Geog. of the U.S.S.R., p. 295.
For figures on agricultural productivity per farm worker, see Lydolph, p. 285.

very briefly, a chart listing the many dif-
alities represented in the Soviet Union.
ap of nationalities in the U.S.S.R. Pick
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of the many different languages spoken in
ion. Discuss: What problems might arise
that the Soviet Union has so many differ-
ties and languages? Point out that pupils
is question in more detail later.

For data on languages and former independence see Petrovich, Sov. Union, pp. 14-18.
Lydolph, Geog. of the U.S.S.R., pp. 261-270 (map and charts on number of nationalities, and discussion).
Deasy, et. al., World's Nations, p. 601 (map).
Cressey, Sov. Potentials, pp. 23-30 (discussion).

G. People who are in contact with each other are likely to borrow cultural traits from each other. Migration of people from one part of the world to another involves the movement of culture and material objects, thus resulting in changes in the area to which people migrate.

S. Tests hypotheses against data.

A. BELIEVES THAT THE SOCIAL SCIENCES CAN CONTRIBUTE TO MEN'S WELFARE BY PROVIDING INFORMATION AND EXPLANATORY GENERALIZATIONS WHICH HELP THEM ACHIEVE THEIR GOALS.

2. Modern transportation facilitie
dustrialization are bringing ab
cultural unity and the movement
into many parts of the country.

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people from one part
to another involves
of culture and mater-
thus resulting in
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ses against data.

**THE SOCIAL SCIENCES
E TO MEN'S WELFARE
INFORMATION AND EX-
ERALIZATIONS WHICH
IEVE THEIR GOALS.**

2. Modern transportation facilities and industrialization are bringing about greater cultural unity and the movement of Russians into many parts of the country.

64. Give pupils figures or charts or maps showing how a number of Russians are moving into areas formerly occupied primarily by other nationality groups. Discuss: What effects do you think this movement of population within the country may have?

Lydolph, Geog. of
p. 275 (Data four
bottom of column

65. Have pupils check back over their lists of hypotheses made so far during the course of the unit. Which ones have they tested and found supported by the data? Contradicted by the data? Which ones still need testing during the remainder of the unit? How can they be tested? (Be sure to keep a list of those which must still be tested by use of historical or other data.)

66. Hold a discussion on the topic: Of what help do you think our study of the geography of the U.S.S.R. has been in helping us decide what our policies should be toward the U.S.S.R.?

jures or charts or maps showing how a num-
; are moving into areas formerly occupied
:her nationality groups. Discuss: What
think this movement of population within
/ have?

Lydolph, Geog. of the U.S.S.R., p. 275 (Data found at the bottom of column one.)

eck back over their lists of hypotheses
ring the course of the unit. Which ones
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he data? Which ones still need testing
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ion on the topic: Of what help do you
ly of the geography of the U.S.S.R. has
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.S.R.?